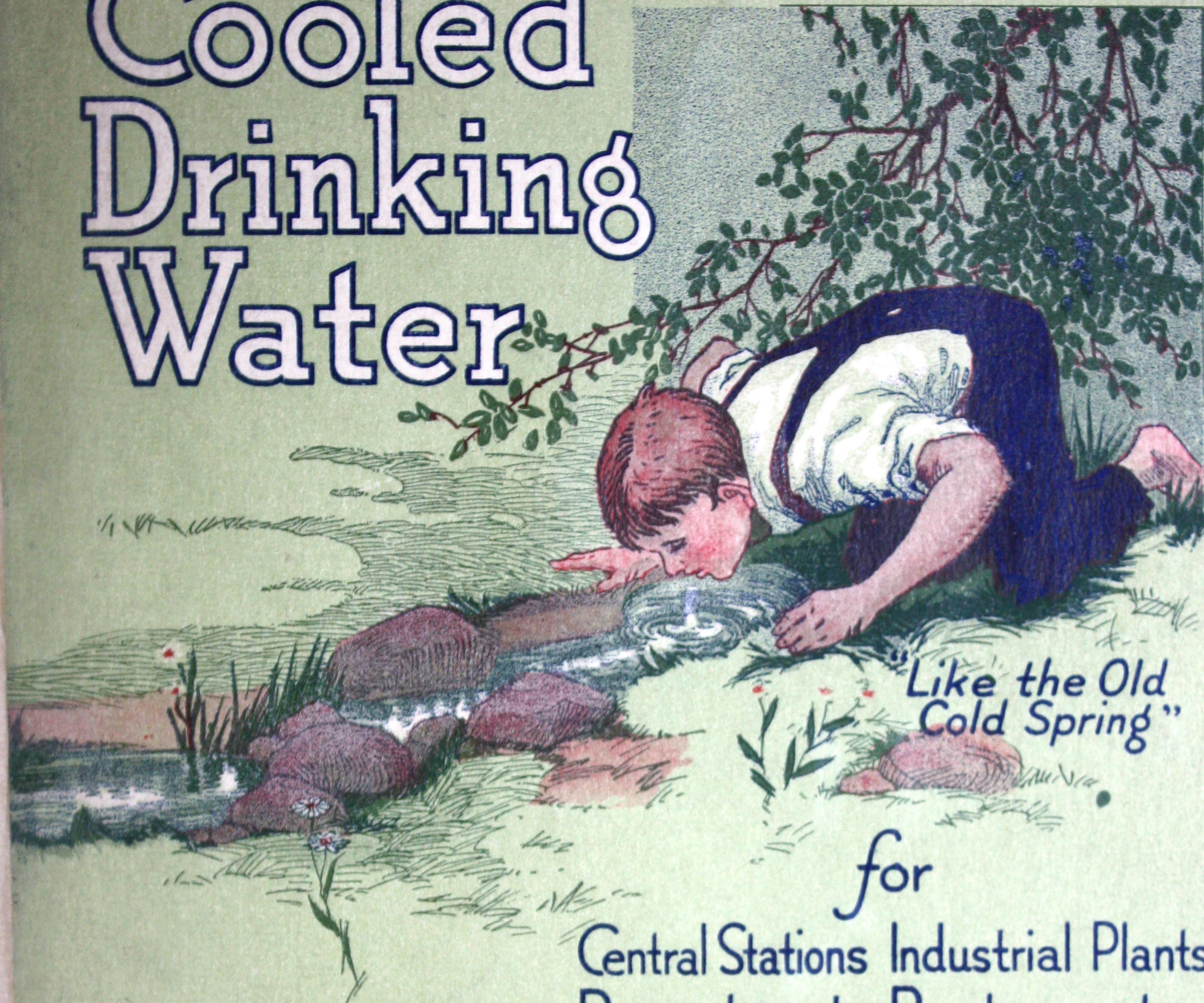


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# Cooled Drinking Water



"Like the Old  
Cold Spring"

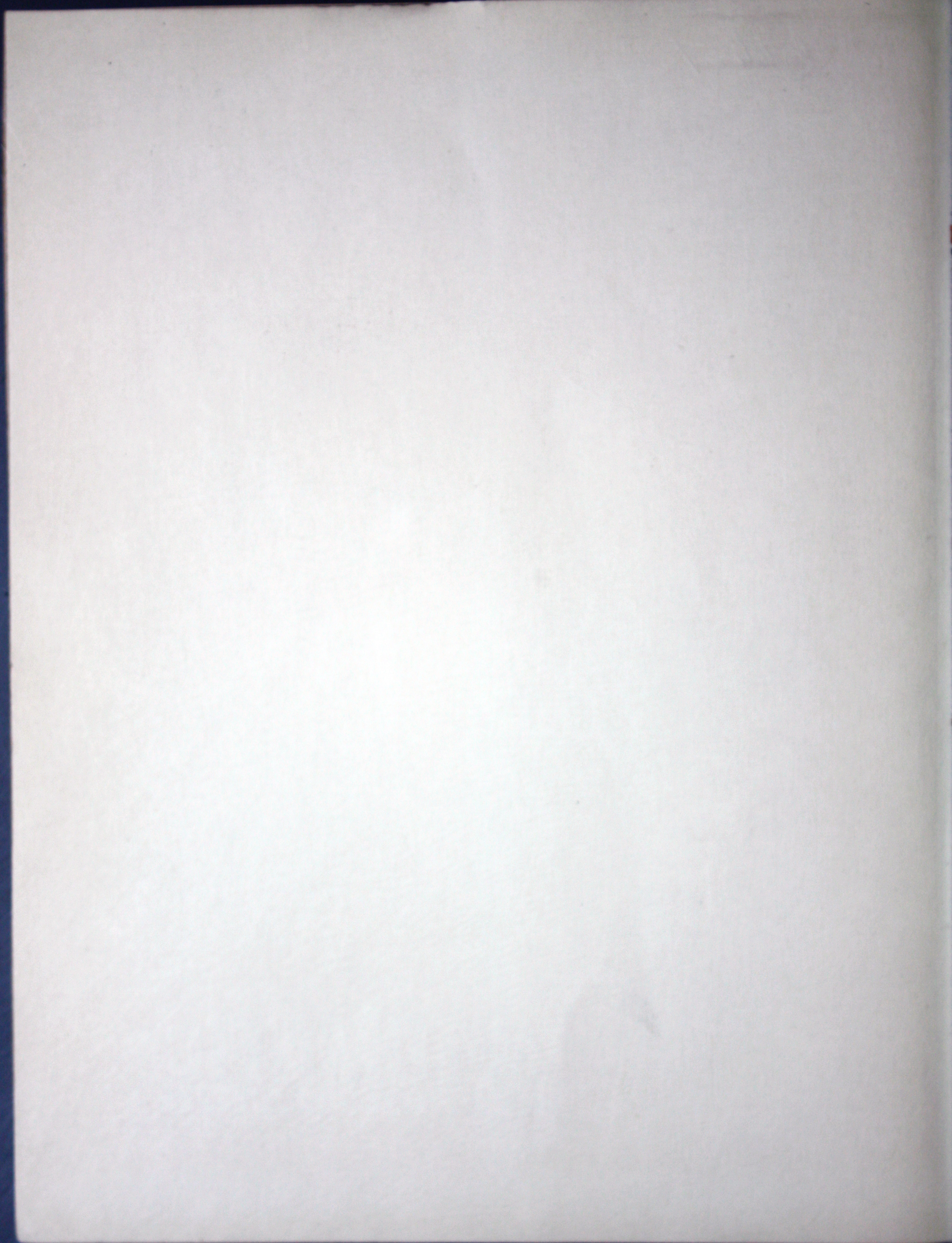
for

Central Stations Industrial Plants  
Department Restaurants  
Stores Office  
Clubs Buildings  
Hotels Theatres

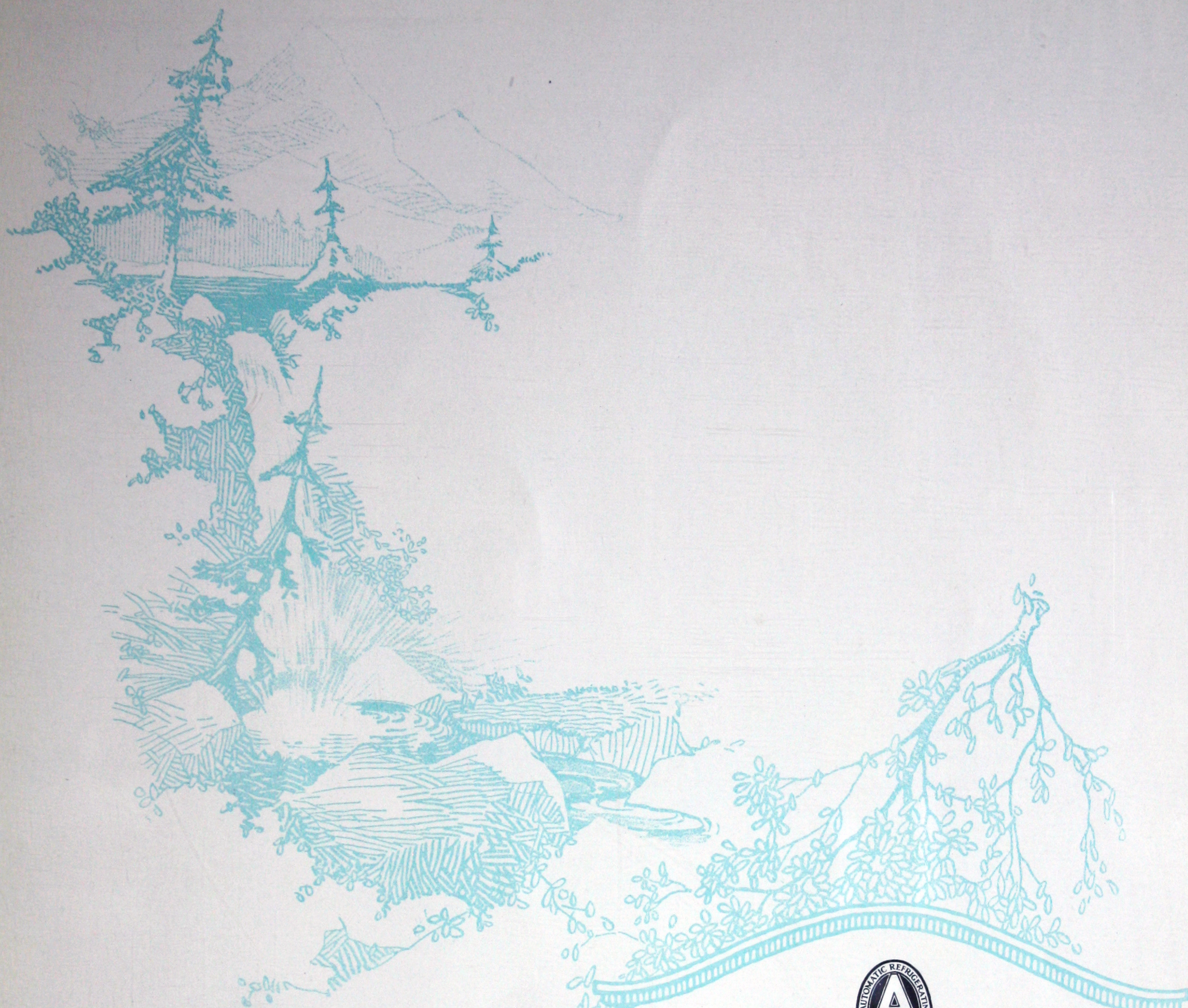
## AUTOMATIC REFRIGERATION

A FACT — THERE IS BUT ONE AUTOMATIC









## *Cooled Drinking Water*

for  
Central Stations  
Industrial Plants, Department Stores  
Restaurants, Office Buildings  
Clubs, Hotels, Theatres

THE AUTOMATIC REFRIGERATING CO.  
(Incorporated)  
Hartford, Connecticut



# AUTOMATIC REFRIGERATION

A FACT — THERE IS BUT ONE AUTOMATIC

## *A Partial List of Installations*

### *Department Stores*

Z. L. White,  
Columbus, Ohio.  
Steiger-Vedder Co.,  
Hartford, Conn.  
Ville de Paris,  
Los Angeles, Cal.  
The Lindner Company,  
Cleveland, Ohio.  
Jenss Brothers,  
Niagara, Falls, N. Y.  
Brown, Thomson & Co.,  
Hartford, Conn.  
J. W. Hale Co.,  
So. Manchester, Conn.  
G. Fox & Co.,  
Hartford, Conn.

### *Hotels*

O Henry Hotel,  
Greensboro, N. C.  
Hotel Savannah,  
Savannah, Ga.  
Hotel Richford,  
Rochester, N. Y.  
Hotel Philson,  
Stockton, Cal.

### *Industrial Plants*

Underwood Typewriter Co.,  
Hartford, Conn.  
(To supply 5000 persons)  
Carnegie Steel Co.,  
Youngstown, Ohio.  
P & F Corbin Division  
American Hardware Corporation  
New Britain, Conn.  
Chase Metal Works,  
Waterbury, Conn.  
Graton & Knight Mfg. Co.,  
Worcester, Mass.  
Hartford Rubber Works,  
Hartford, Conn.

National Acme Mfg. Co.,  
Windsor, Vt.  
H. Fendrich,  
Evansville, Ind.  
B. R. & P. Railroad Shop,  
Du Bois, Pa.

### *Office Buildings*

National City Bank Bldg.,  
Indianapolis, Ind.  
Atlantic National Bank Bldg.,  
Jacksonville, Fla.  
Phoenix Mutual Life Ins. Co.,  
Hartford, Conn.  
Gunter Bldg.,  
San Antonio, Texas.  
Rochester Chamber of Commerce Building,  
Rochester, N. Y.  
The Starks Realty Co.,  
Louisville, Ky.  
Dept. of Justice Bldg.,  
Washington, D. C.  
Aetna Life Insurance Co.,  
Hartford, Conn.  
Davidson & Davidson Building,  
Washington, D. C.

### *Restaurants*

(With Water Cooling Systems)

Cadillac Restaurant,  
New York City.  
Childs Co.,  
New York City.  
C. & L. Lunch,  
New York City.  
Western & Southern Life Ins. Co.,  
Cincinnati, Ohio.  
Guaranty Trust Co.,  
New York City.  
Chase National Bank,  
New York, N. Y.

### *Main Office and Works - Hartford, Connecticut*

#### *Branch Sales and Service Offices:*

|                  |                    |                     |
|------------------|--------------------|---------------------|
| Atlanta, Ga.     | Huntington, W. Va. | New York City       |
| Boston, Mass.    | Jacksonville, Fla. | Philadelphia, Pa.   |
| Chicago, Ill.    | Los Angeles, Cal.  | Rochester, N. Y.    |
| Cincinnati, Ohio | New Haven, Conn.   | San Francisco, Cal. |
| Denver, Colo.    | New Orleans, La.   | Seattle, Wash.      |
| Honolulu, T. H.  |                    | Washington, D. C.   |

#### *Direct Representation:*

Baltimore, Md.

Houston, Texas.





## *"Like the old Cold Spring"*

Who of us has not longed for the favorite old spring, almost hidden by low lying branches, where always a refreshing drink could be found?

It must have been the memory of such a spot that caused the engineers of The Automatic Refrigerating Company of Hartford to conceive a satisfactory way of transplanting a clear, cool, bubbling spring into office buildings, department stores, theatres, central stations, hotels and industrial plants.

They recognized that wherever people are gathered, pure, cool drinking water is exceedingly desirable.



## For Office Buildings

To many, the idea of having to drink water exposed to possible contamination by objectionable deposits from melted ice is extremely unpleasant. Further, icing drinking water is a needless, costly nuisance. It is sloppy, unsanitary—disliked by the tenants and costly to building owners.

Did you ever put down in black and white, what it cost to keep a tank or bottle of ice water in an office? The tenant may pay for the water but there is far more to it than just that cost—if bottled “spring water” and ice are used.

The following example gives a very conservative estimate of the cost of Automatic Refrigeration as compared with ice.

For each of the 120 offices in a certain New York building, it cost \$3.00 for ice and a \$1.50 for bottled water each month or \$6,480.00 per year for the entire building. Additional porter hire for this building was about \$3,600.00 per year or a total of \$10,080.

Equivalent Automatic Refrigeration operating to supply cool drinking water at convenient bubblers throughout the building will provide a much more satisfactory system at a cost of about \$1,650.00 per year including operating cost, interest on money invested, etc.

Even when the cost of Automatic Refrigeration is divided as rent among the 120 offices it means a tremendous saving to the tenants.

Then, consider the extra trips the elevators have to make to take ice water to the different floors—and to bring the empty bottles down.



*Western & Southern Life Insurance Co.  
Cincinnati, Ohio*

Architect: Mr. Harry Heke  
Cincinnati, Ohio

Automatic Refrigeration supplied to:

|                        |                              |
|------------------------|------------------------------|
| <i>Restaurant Box</i>  | <i>Drinking Water System</i> |
| 4'6" x 5' x 6'3" (35°) | (320 gallons)                |

*Ice Making Tank*  
(500 pounds)



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## *Cooled Drinking Water*

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Automatic Refrigeration saves the wear and tear in hauling ice in and the needless tracking with dripping ice through the corridors—other bothersome items.

With the installation in your building of the Automatic Refrigerating plant, all drinking water problems vanish. No more annoyance from ice or bottled water deliveries—no mess in the office or halls—nothing but clean, cold, drinking water at the minimum expense.

Needless to say Automatic Refrigeration is a powerful advertising force to the building owner.

The fact that a building is equipped with Automatic Refrigeration attracts the better class of tenant and materially aids the rental agent. It is a service that many tenants have learned to expect.

### *Automatics Operate Themselves*

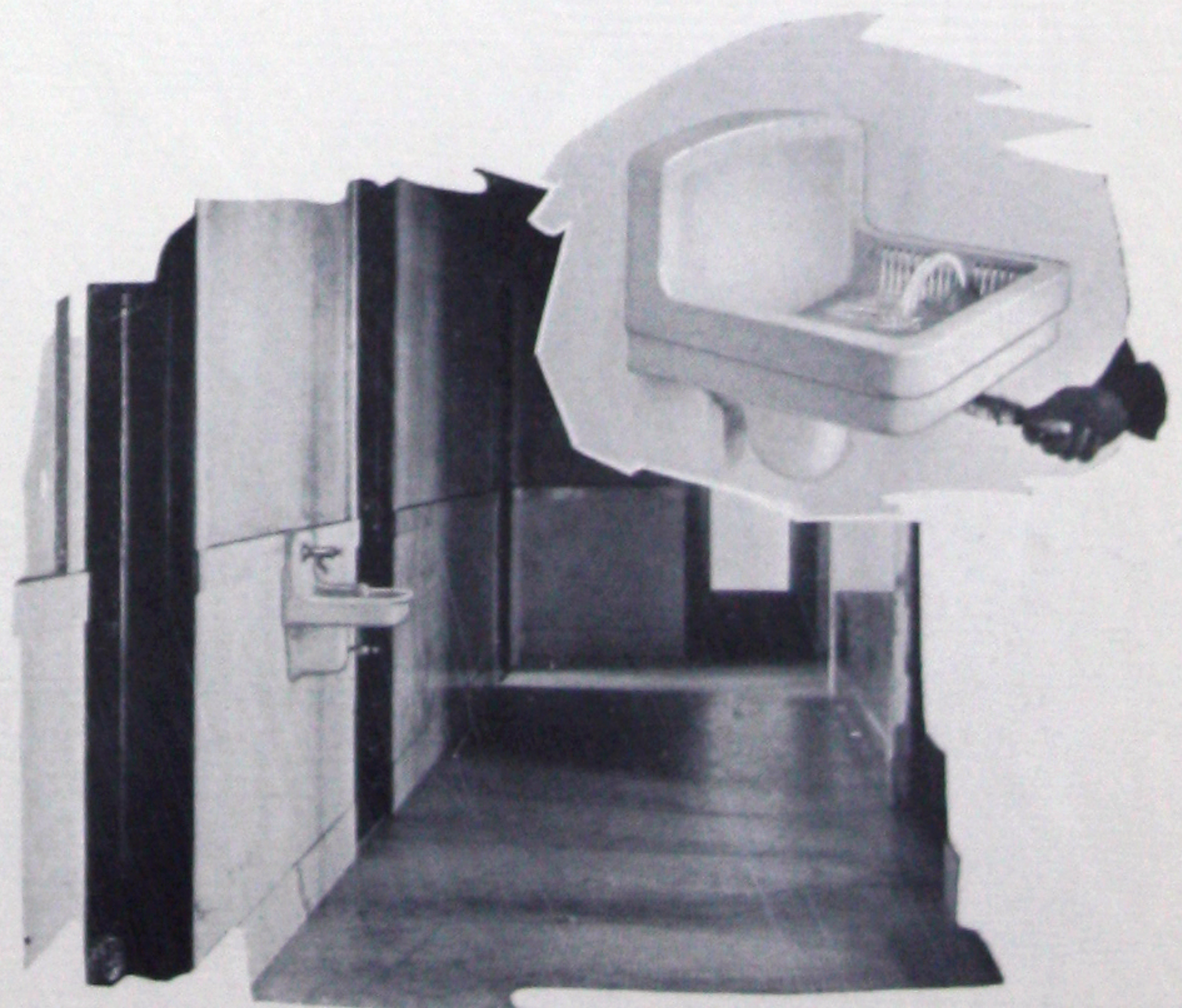
Electrically driven, Automatic plants start and stop themselves. They require no skilled operators and can be placed anywhere in the building. In some instances, we have installed Automatic plants in the pent house.

As the example on the opposite page shows, Automatic plants save enough over the cost of ice to pay for themselves in a short time. Furthermore, where Automatics have replaced manually controlled plants, half the previous operating cost has been saved.

Owners of money-making buildings are appreciative of the better refrigerating service supplied by Automatic Refrigeration and many of the finest buildings throughout the country are now Automatic equipped.



The automatically cooled fountain eliminates messy ice delivery and questionable iced drinking water and greatly increases the rental value of every office building so equipped.





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## *Automatic Refrigeration*

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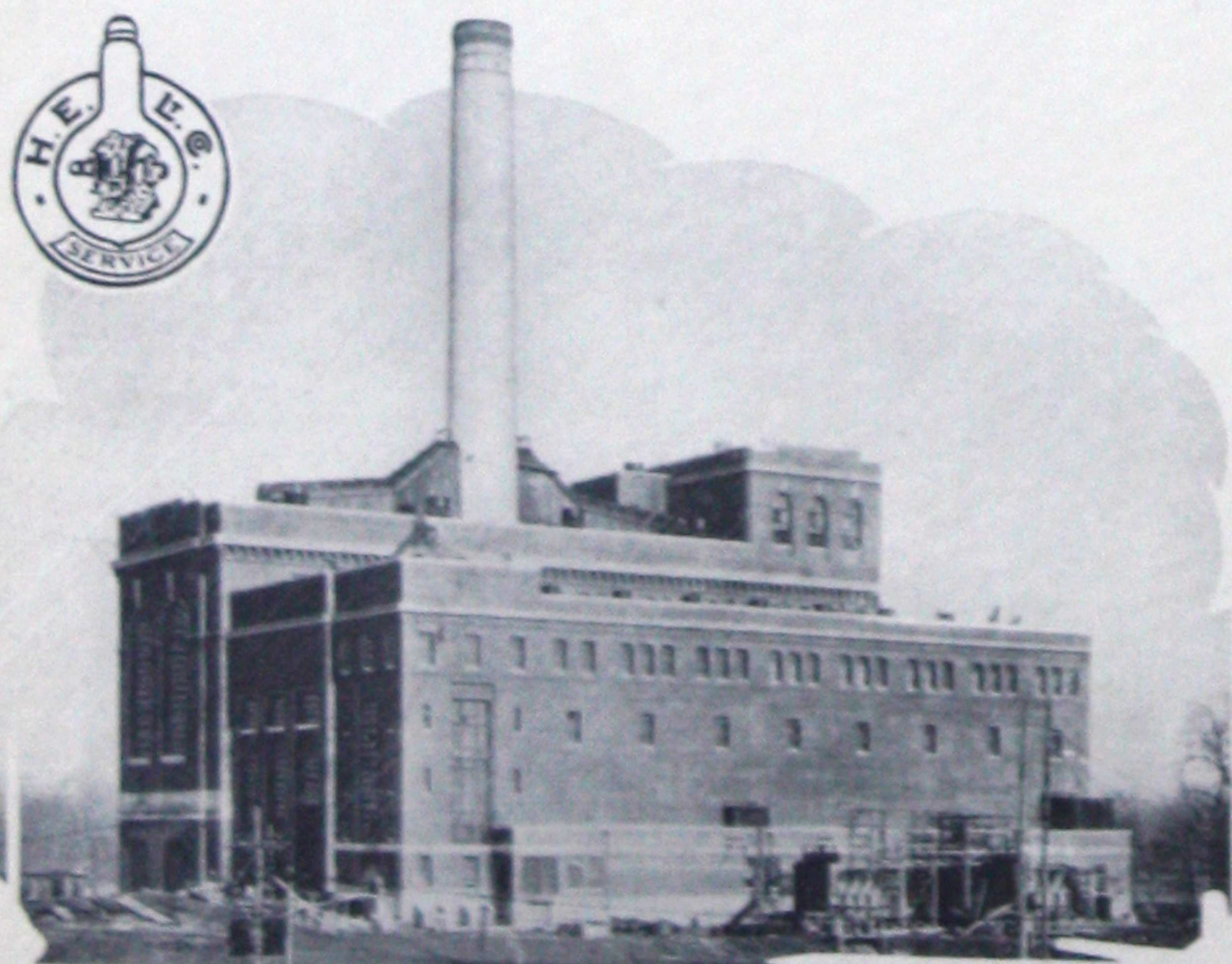
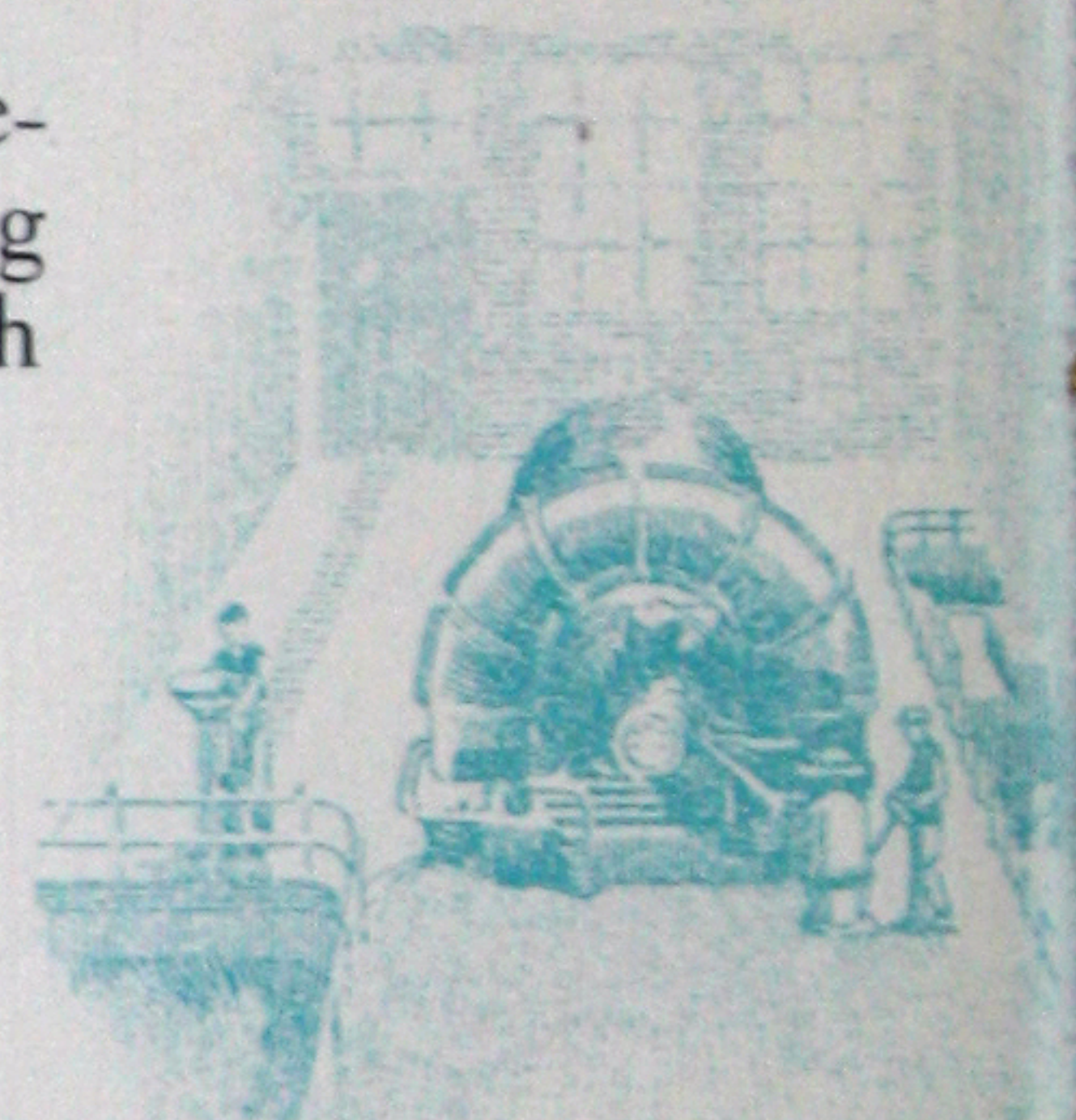
### *For Industrial Plants*

There is a fast growing appreciation of the physical and economic advantages of furnishing a bountiful supply of pure, cool water to workers in all lines of industry. The old bucket and dipper or iced water cooler methods are not only unsanitary, expensive and wasteful of time but many cases on record prove conclusively that these methods account for much illness. They encourage drinking water in excessive quantities and of an improper temperature. Particularly, in mills, foundries and smelters, where ice is used, cramps and contagious diseases have been frequent. This, of course, spells lowered efficiency and materially decreased production.

### *Essential Requirements for an Ideal System*

1. The temperature of the water always should be correct and carefully regulated. Otherwise, physical injury may ensue. Luke warm water is not palatable and is not apt to be drunk in sufficient quantities.
2. Experience has proven that water held about 45° F is the most acceptable from every standpoint. It acts as a mild heart stimulant and also, to some extent reduces the internal temperature of the body.
3. Water should be clear, attractive in appearance and free from odor and discoloration.
4. Common drinking vessels should be eliminated. The most feasible way is to substitute fountains or bubblers.
5. The drinking places should be close to the workmen. A properly designed system will reduce loss of time to a minimum.

The problem of meeting these requirements has been solved with remarkable success by the installation of Automatic Refrigerating Plants; a water cooling tank and insulated distributing lines—with bubblers at handy points.



*Hartford Electric Light Co.  
Hartford, Conn.*

Automatic Refrigeration supplies this 130,000  
K. W. Station with properly refrigerated  
drinking water



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## *Cooled Drinking Water*

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This has been accomplished at a total outlay of less than the operating cost for a very few years with the old bucket and ice method.

Even when subjected to the life-taking heat of a foundry, Automatic Refrigeration assures the worker cool water at just the right temperature.

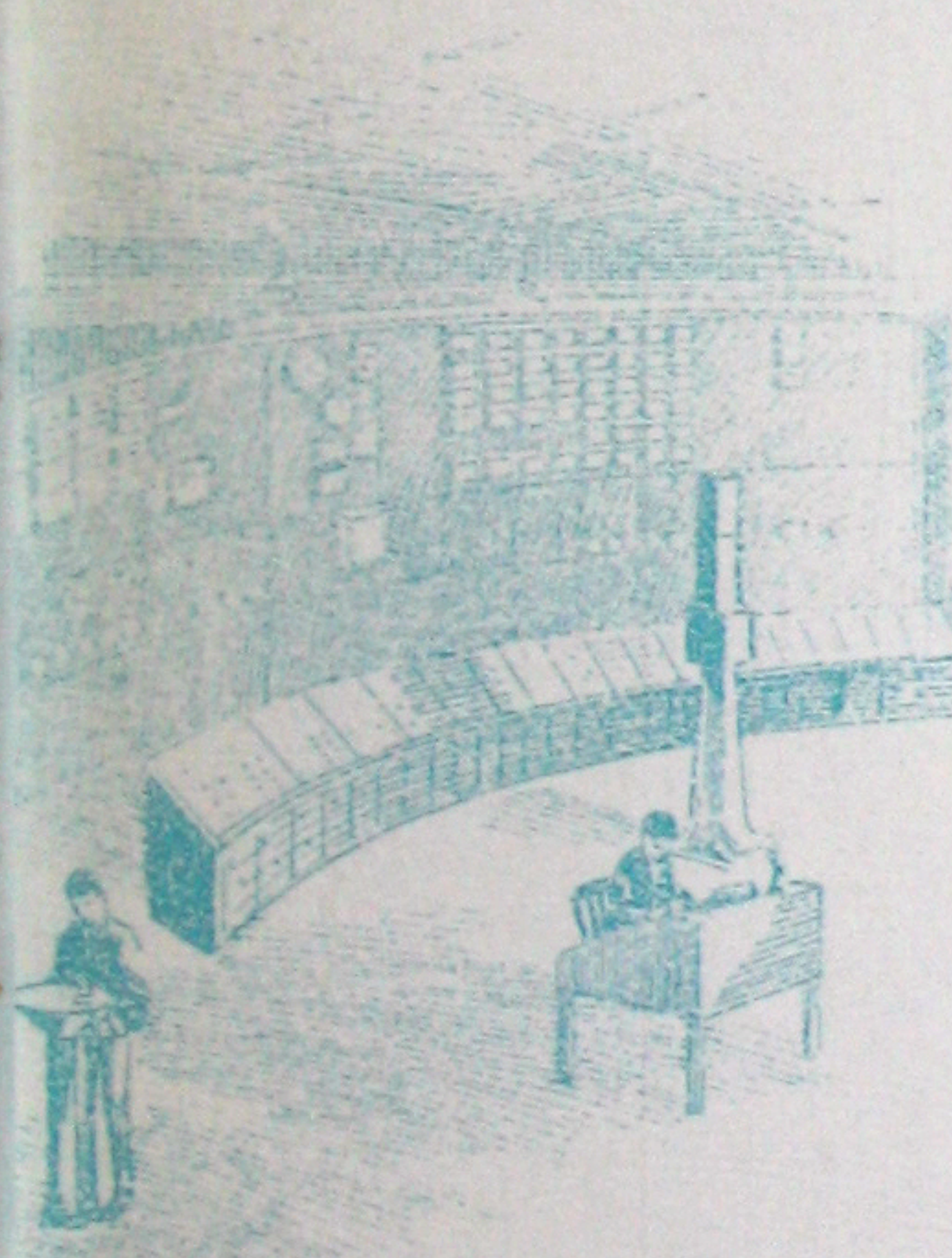
Automatic Refrigeration means convenience and better health; a marked saving over ice; increased satisfaction of employees and a remarkable reduction in time lost from productive work. An official of a large steel plant in the South remarked that his company was losing thousands of dollars in time wasted each year using the antiquated system of cooling water with ice.

### *Safe Automatic Operation Paramount Feature*

Too much emphasis cannot be laid on the claim that there is but *one* Automatic Refrigerating System. To be truly Automatic, as the term is understood and applied by The Automatic Refrigerating Company of Hartford, something more is needed than mere thermostatic control or the purely precautionary devices found on any other type of refrigerating system. The Automatic is the only plant that cares for every condition that may arise and does it automatically. It is built by an Institution that for thirty years has solved refrigerating problems with Automatic equipment.

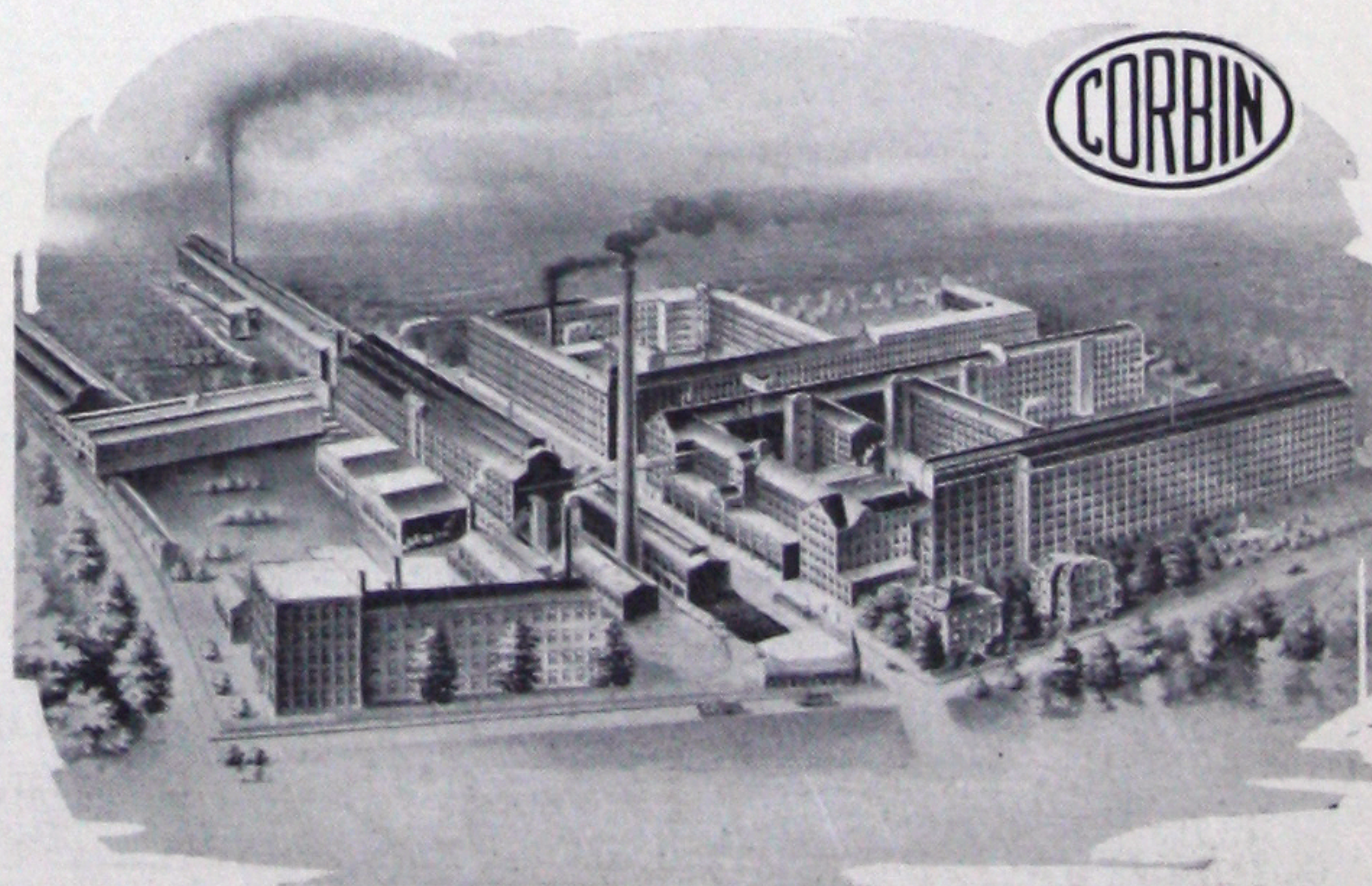
### *Automatics Need Little Attention*

Another prominent advantage of the electrically operated Automatic plant is that it is dependent neither upon steam nor proximity to the engine room. It can be placed at the most convenient point. This obviously eliminates the additional cost and losses incident to long lines of unnecessary piping. The use of the Automatic instead of a steam driven plant has often saved a large portion of the installation cost.



*P & F Corbin Division  
American Hardware Corporation  
New Britain, Conn.*

Equipped with Automatic Refrigeration for  
cooling drinking water





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## *Automatic Refrigeration*

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### *For Hotels, Theatres and Department Stores*

The old fashioned custom of icing drinking water is both objectionable to many who use it and costly to the management. It is an extravagant, unsanitary means of supplying adequate drinking water service.

For hotels, the Automatic Refrigerating Plant provides an ideal way for cooling drinking water to any desired temperature for any number of bubblers or fountains, located at convenient points in the guest rooms, near the ball room, in the lobby, the laundry, in the kitchen and employee's quarters.

The advantages of the Automatic system for cooling water are many. The water is *constantly circulating* and is always of a uniform, refreshing temperature. A twist of the handle and cold water is ready—instantly. Think what a good will building and powerful advertising force this is for the hotel that provides the travel-tired guest with a handy means for quenching his thirst the instant he wants it!

Hotel men tell us that refrigerated drinking water cuts down the bell boy force by 60%. Hotel records show that the average time for serving ice water by the old methods is twelve minutes. As soon as the Automatic is installed, calls need only be made for rooming and delivering packages with the possible exception of extraordinary requests. It is the only logical way to serve drinking water to the rooms and it eliminates tipping.

Refrigerated bubblers or fountains greatly reduce glassware breakage. The experience of one hotel company whose yearly replacement of water glasses was 1800% is a fair example of the waste that at least can be partially saved by Automatic Refrigeration. Stop for a moment and consider what that means—18 tumblers destroyed to



*Hotel George Washington*  
(Now Building)  
*Washington, Pa.*

(Another William Foor Hotel)

Architect: Mr. W. L. Stoddart  
New York City

Other William Foor Hotels  
equipped with Automatic Refrigeration are  
the O'Henry Hotel, Greensboro, N. C., the  
Sheraton Hotel, High Point, N. C.  
and the Aragon Hotel,  
Jacksonville, Fla.





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## *Cooled Drinking Water*

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every one kept in service. Fountains also, of course, save ice previously used by employees. This alone is a big saving in a year's time.

Did you ever figure what it cost to maintain a room jug ice filling tank? Is it always sanitary and is there not a tremendous loss through melting? At night, it is customary to leave the tank full of ice. In the morning—especially in hot weather, it is a pool of water leaking out over the floor, damaging the surroundings.

The modern hotel must install cooled circulating drinking water throughout the building to get the jump on its competitors. Many hotels are now equipped with the Automatic system and guests at these enterprising hostelrys are extremely appreciative of the increased service.

### *Automatics Cheaper Than Ice*

Looking at the question of refrigeration from the standpoint of comparative economy, the use of ice is a sheer waste of money. If the comparative efficiencies and convenience of ice and Automatic Refrigeration are considered, the advantages of having Automatic Refrigeration are tremendous. But on the cost of operation alone—the Automatic will save enough over the cost of ice to pay for the plant in a very short time. Automatics, also show to advantage when compared with manually controlled plants. Where Automatics have replaced such plants, at least half the operating cost has been saved.

Automatic Refrigerated bubblers and fountains are also a huge asset to department stores and theatres. Many are the favorable comments from customers and patrons of buildings so equipped.

How Automatic Refrigeration benefits hotels, department stores and restaurants in many other ways is clearly brought out in our booklet "Automatic Refrigeration for Restaurants, Hotels and Department Stores". A copy of this booklet will be gladly sent upon request.

### *Maas Building, Tampa, Fla.*

Architect: Mr. Francis J. Kennard

(The largest department store in Florida)

Automatic Refrigeration supplies cool drinking water throughout the building to 34 fountains





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## *Automatic Refrigeration*

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### *Automatic Service Everywhere*

Every Automatic Refrigerating Plant is designed to give maximum economy and efficiency. The interest of both the owner of the plant and the Automatic Refrigerating Company demands not only efficiency from the plant as it is installed, but requires that this efficiency be maintained. To that end, The Automatic Refrigerating Company operates branch offices and service stations in all parts of the country. Stock parts are always kept on hand for repairs and an organization of men experienced in Automatic refrigerating engineering is maintained. In selling Automatic Refrigeration, service, rather than an assembly of equipment, is the commodity offered. In effect, the purchaser of an Automatic plant buys the guarantee of the manufacturer that a certain service will be rendered rather than a piece of mechanism whose value depends upon the personal ability of some individual to run it. The development of mechanical refrigeration by The Automatic Refrigerating Co. has today reached the point where it is safe to say that any refrigerating problem can be simplified by the installation of the Automatic Refrigerating Plant.

### *Automatic Data Sheets in the Back of Book*

As each projected installation is a separate engineering problem, it is necessary in order to accurately calculate refrigeration requirements, to make an intelligent recommendation, that the data, called for on the blank given at the back of this booklet, be supplied. A rough sketch of the rooms or corridors to be supplied with cooled drinking water should also be made, showing their relative arrangement and any special conditions which exist, or are desired, should be fully described.

The elevation of a typical refrigerated drinking water system; dimensions of a typical room layout of the Automatic plant, and an elevation of various types of water-cooling tanks are shown on pages 18 and 19.



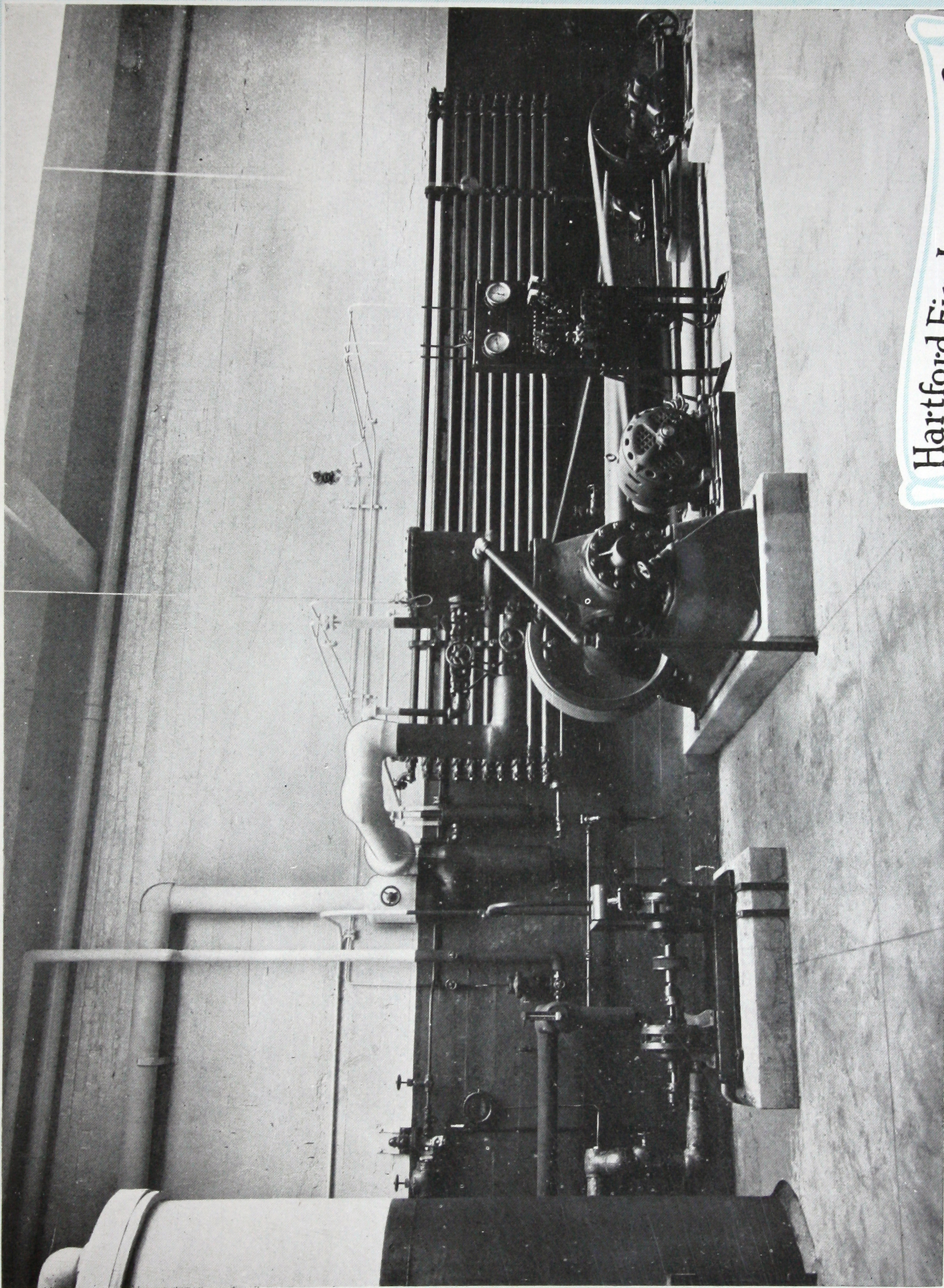
*Heard Building, Jacksonville, Fla.*

Architect: Mr. H. S. Perring

Equipped with Automatically cooled  
drinking water system



*Cooled Drinking Water*

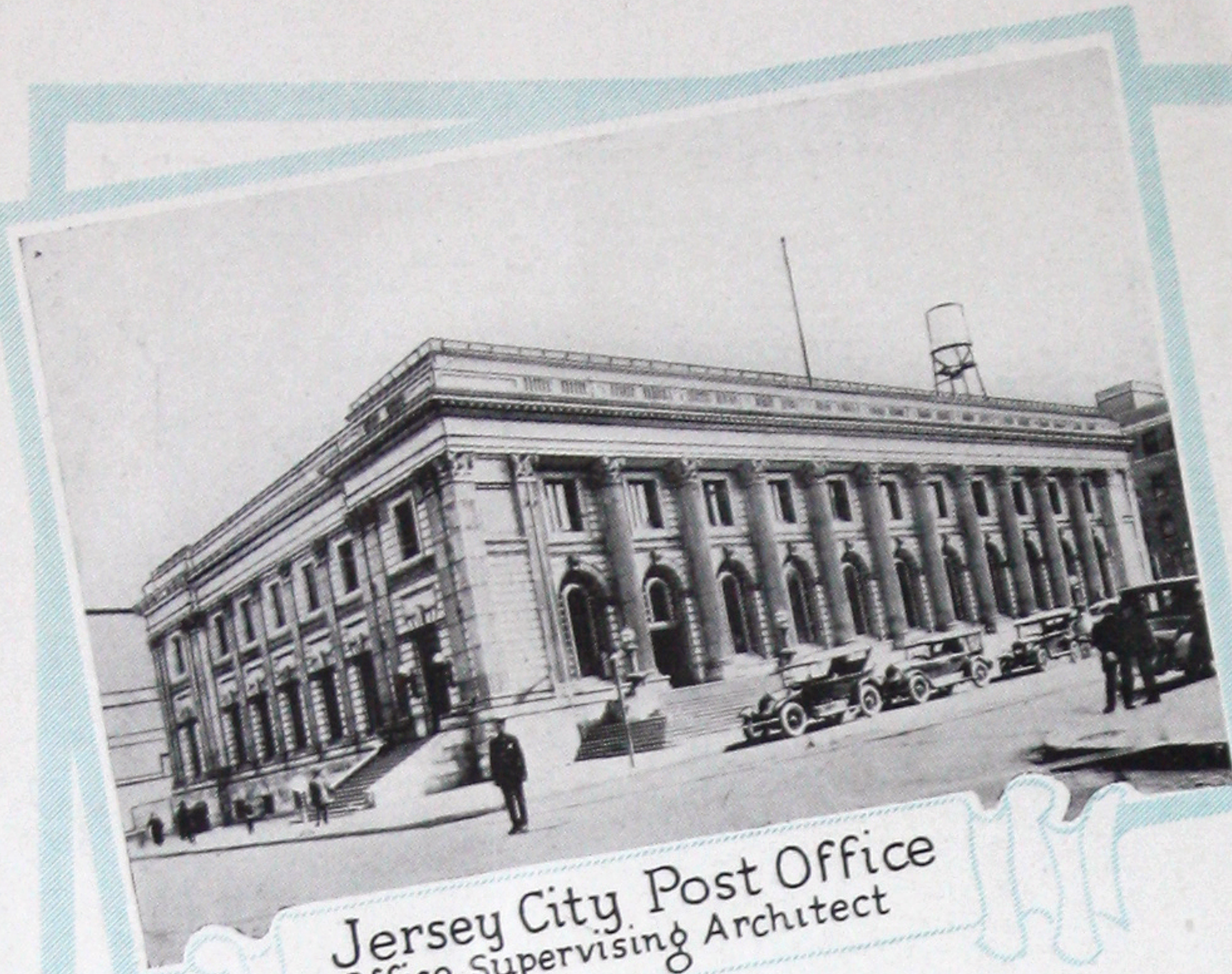


Hartford Fire Insurance Co.  
HARTFORD, CONN.



## Automatic Refrigeration

Many Prominent Buildings are Equipped with Automatics



Jersey City Post Office  
Office Supervising Architect



Municipal Bldg. Hartford Conn.  
Architect Davis & Brooks, Hartford.  
Consulting Engineer A. L. Webster N.Y.



Hartford Fire Insurance Co. Hartford Conn  
Associated Architects, Edwin S. Dodge, Parker, Thomas & Rice, Boston  
Con. Engineers Hollis French & Allen Hubbard



Hartford Connecticut Trust Co.  
Architect B. W. Morris, N.Y.  
Consulting Eng. Werner Nygren, N.Y.



Travelers Ins. Co. Hartford, Conn.  
Architect Down Barber  
Con. Eng. Werner Nygren, Edw. N. Friedman N.Y.



Brady Bldg. San Antonio Texas  
Architect Westlake Construction  
Co. St. Louis, Mo.



*Cooled Drinking Water*

*Automatically Equipped Buildings and Plants of Well Known Concerns*

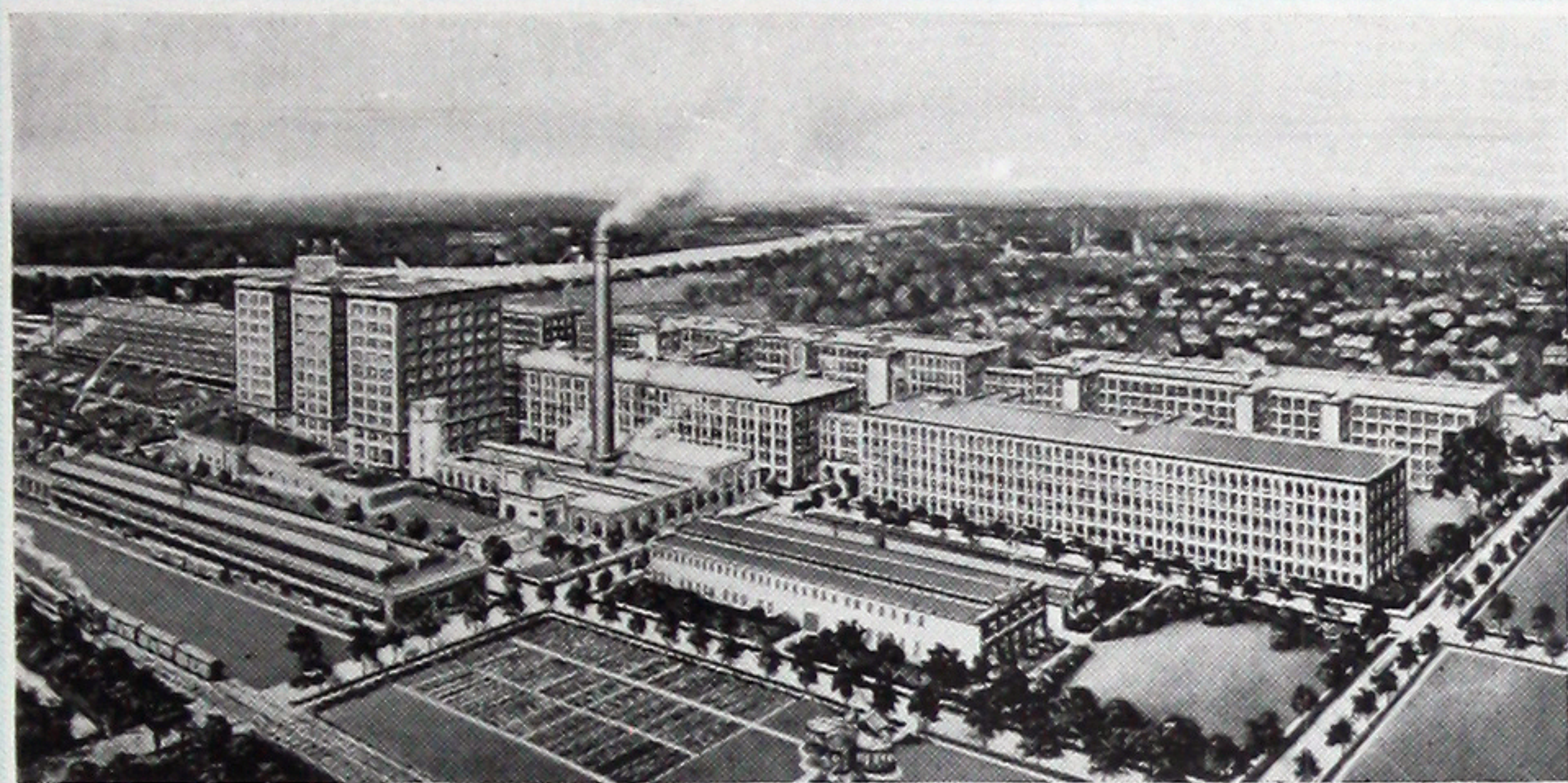


Hendee Mfg. Co., Springfield Mass.  
*National*

*Bridgeport*  
BRASS  
TRADE CO. MARK



Bridgeport Brass Co.  
Bridgeport Conn.



National Cash Register Co.  
Dayton Ohio

*Ford*

**Bon Ton**  
CORSETS



Royal Worcester Corset Co.  
Worcester, Mass.



Armor Auto Co.  
Houston Texas

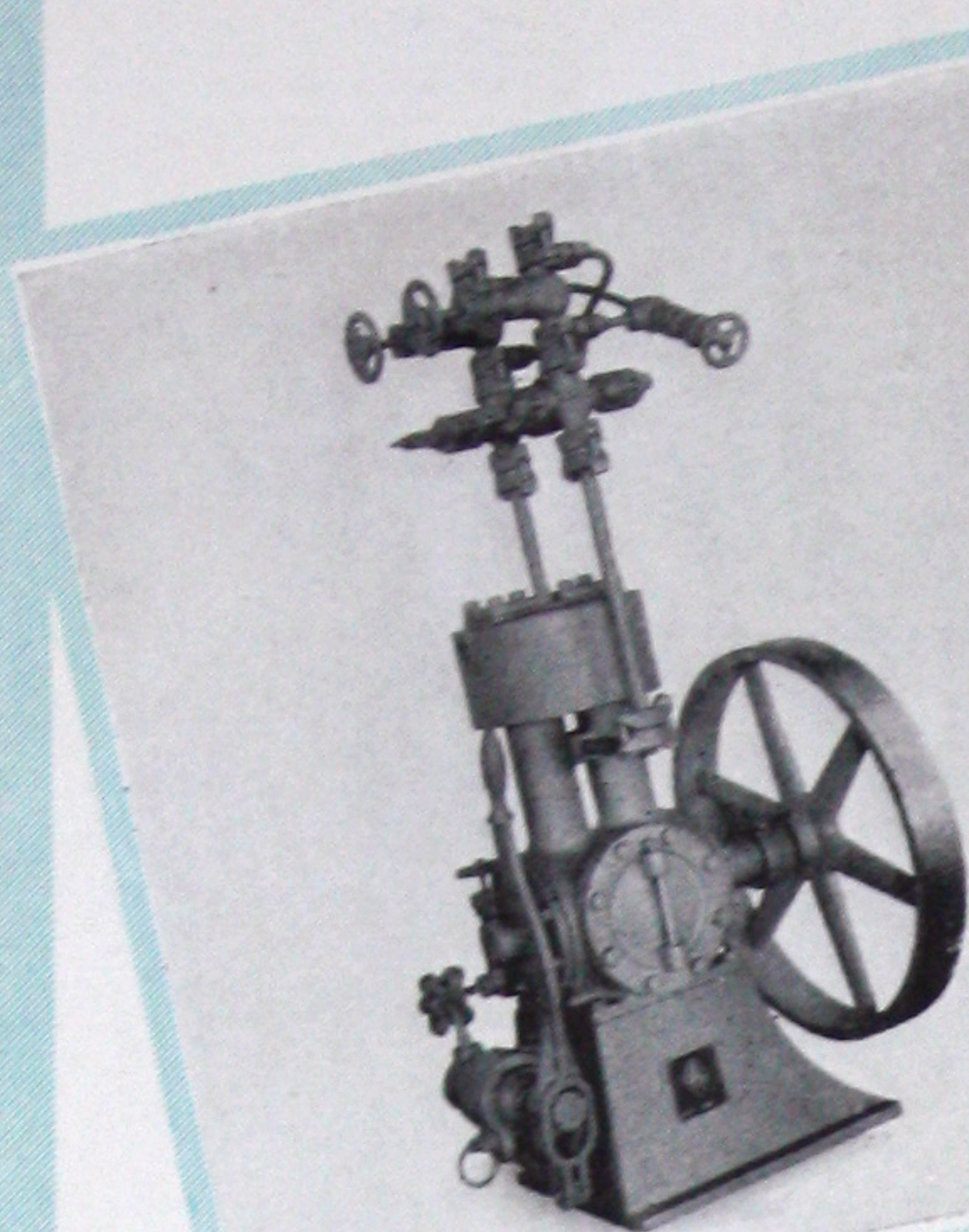
**COLT**



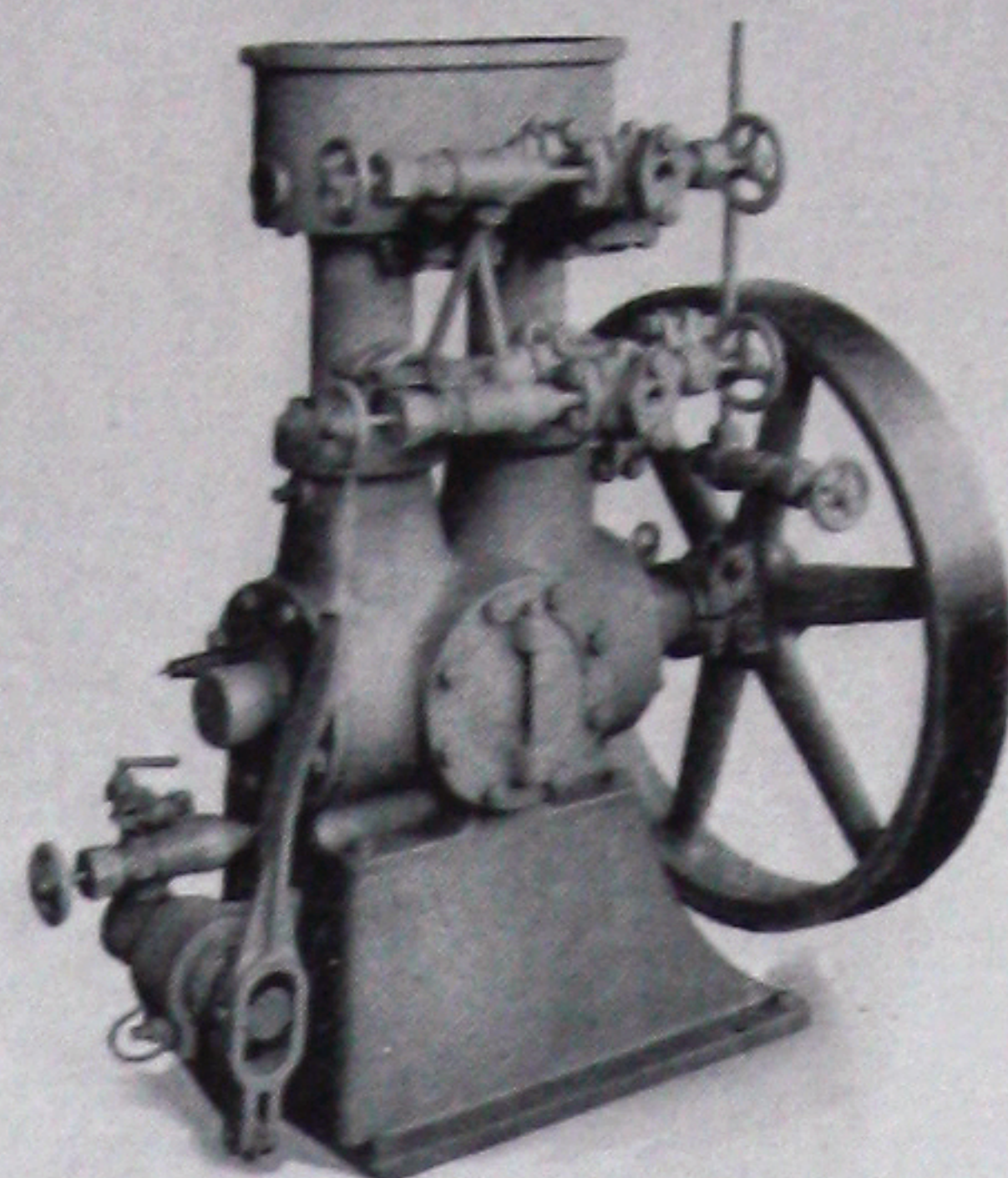
Colt's Patent Fire Arms Mfg. Co.  
Hartford Conn.



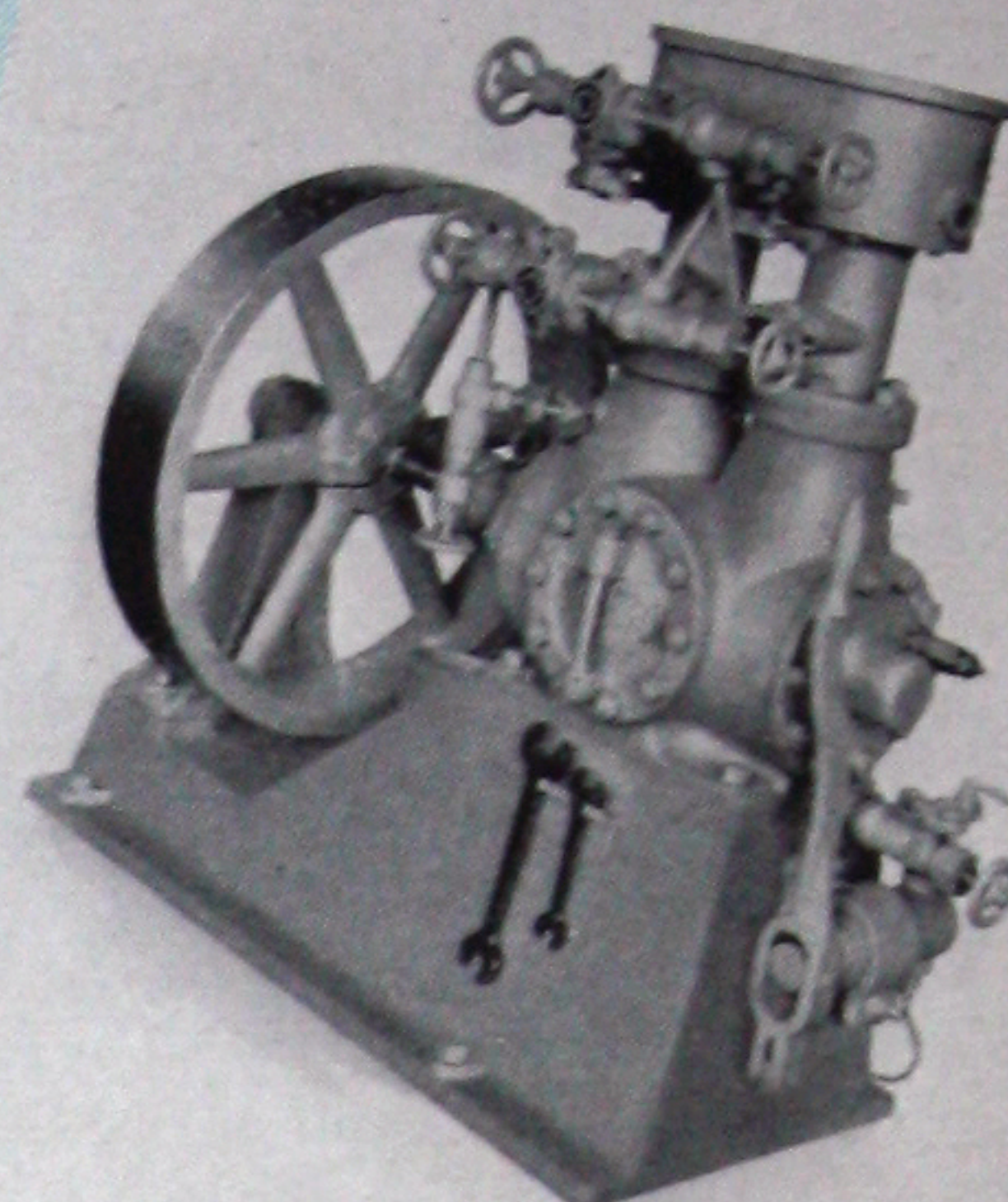
*Automatic Refrigeration*



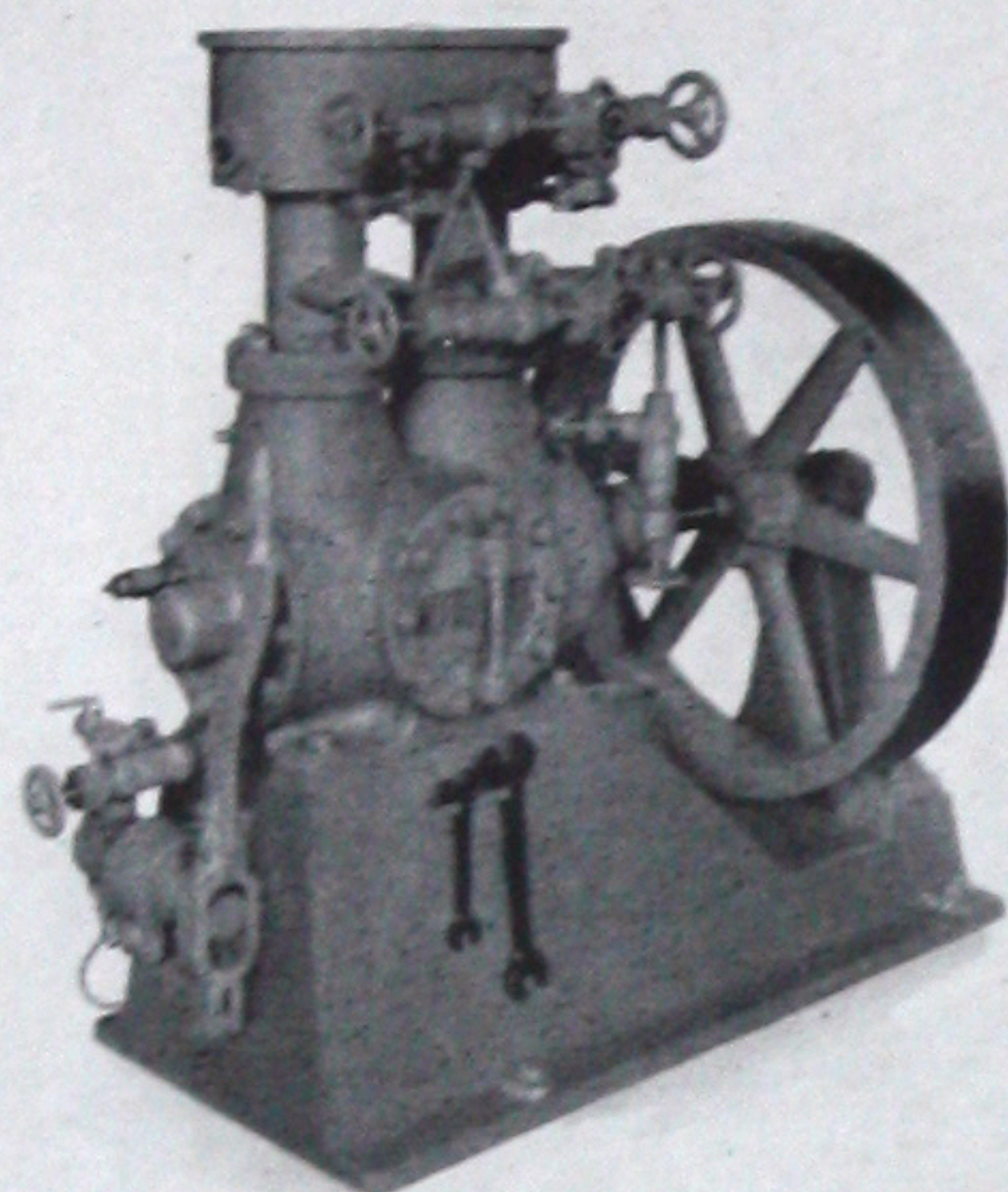
2½"X2½"



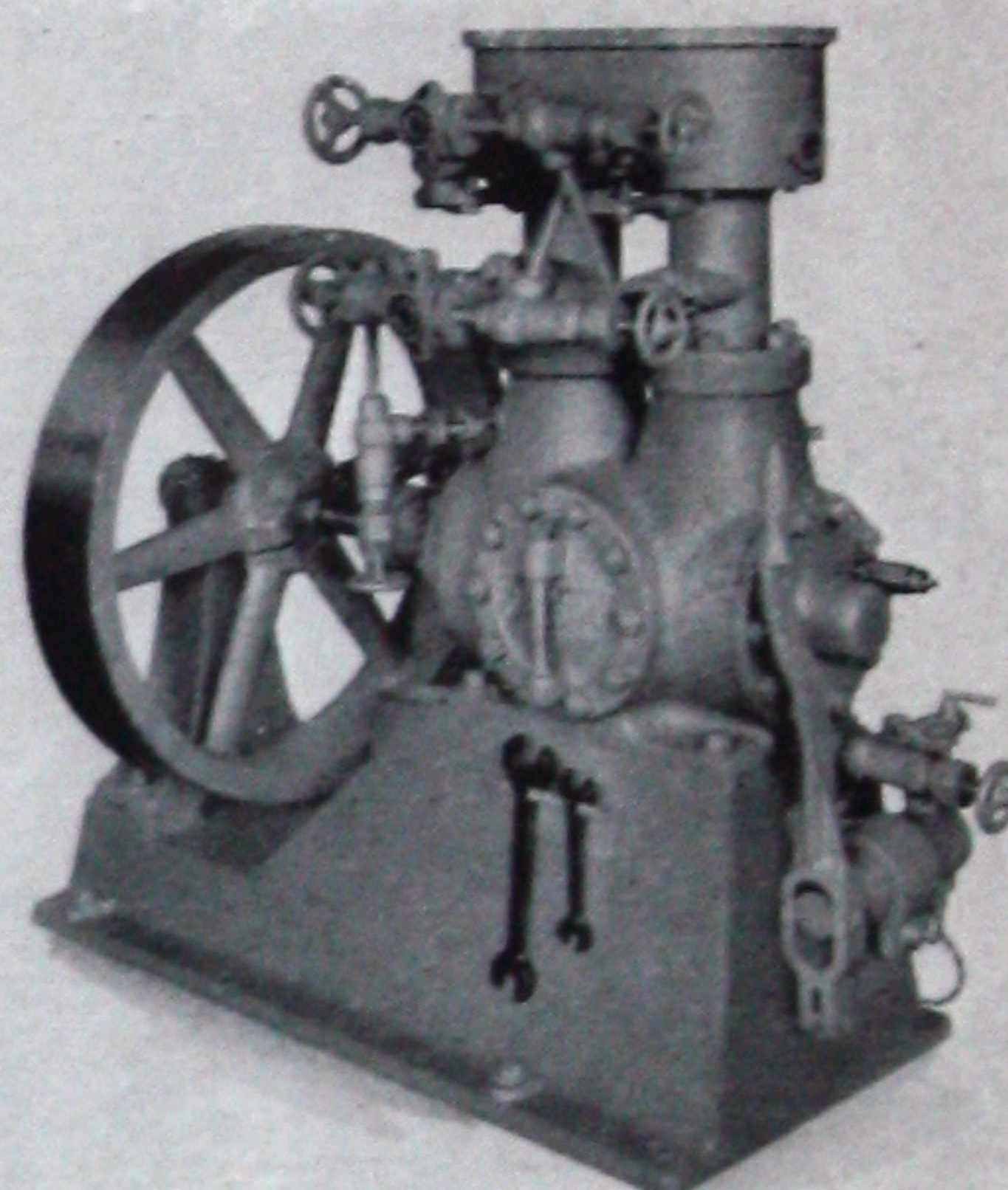
3"X3"



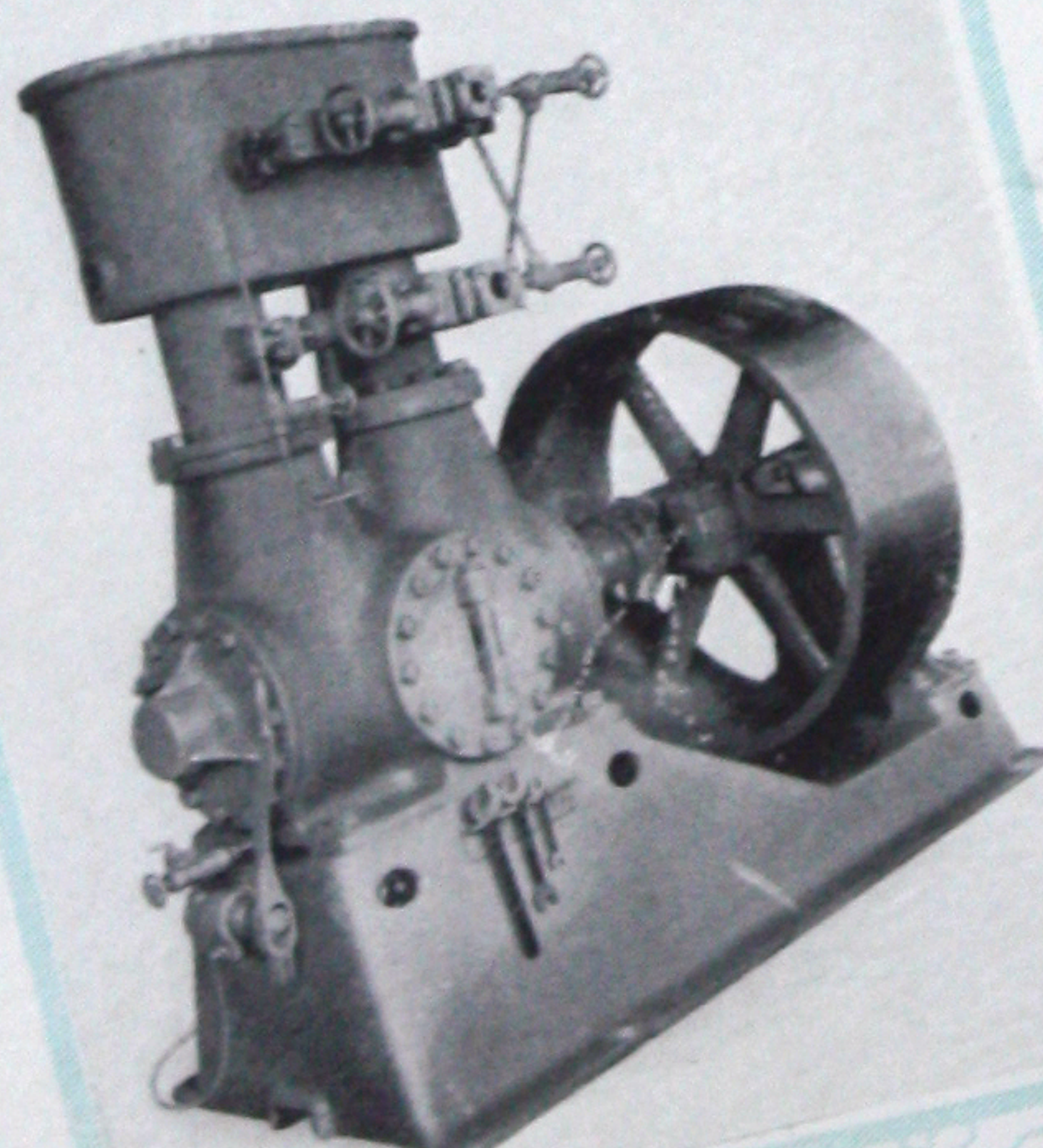
3½"X 3½"



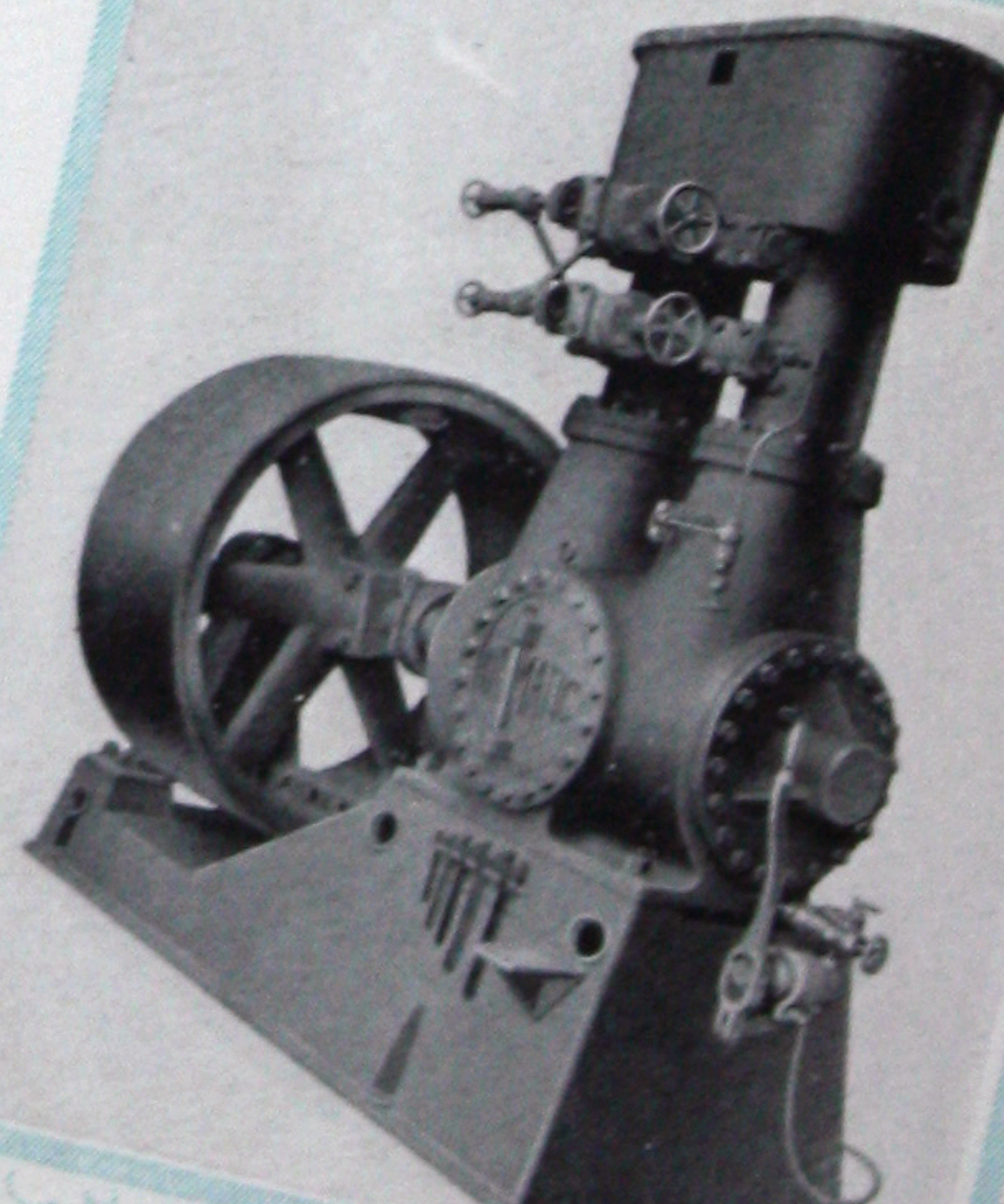
4¾"X 4¾"



6"X6"



8"X8"



10"X10"



## How the Important Features of the Automatic Refrigerating Plant Function

Throughout the history of mechanical refrigeration and particularly during the last thirty years, the experience of both manufacturers and users has clearly indicated that the compression system, using anhydrous ammonia as a cooling fluid, is by far the most satisfactory and when properly controlled and operated, as in the Automatic system, is the most economical and safest method.

Referring to the drawing of the drinking water system on Page 19, it will be seen that the main parts of the Automatic Refrigerating System are (1) the compressor; (2) the condenser; (3) the receiver; (4) the Automatic expansion valve; (5) the Automatic water regulator; (6) the Automatic high pressure safety cut off and (7) the Automatic switchboard.

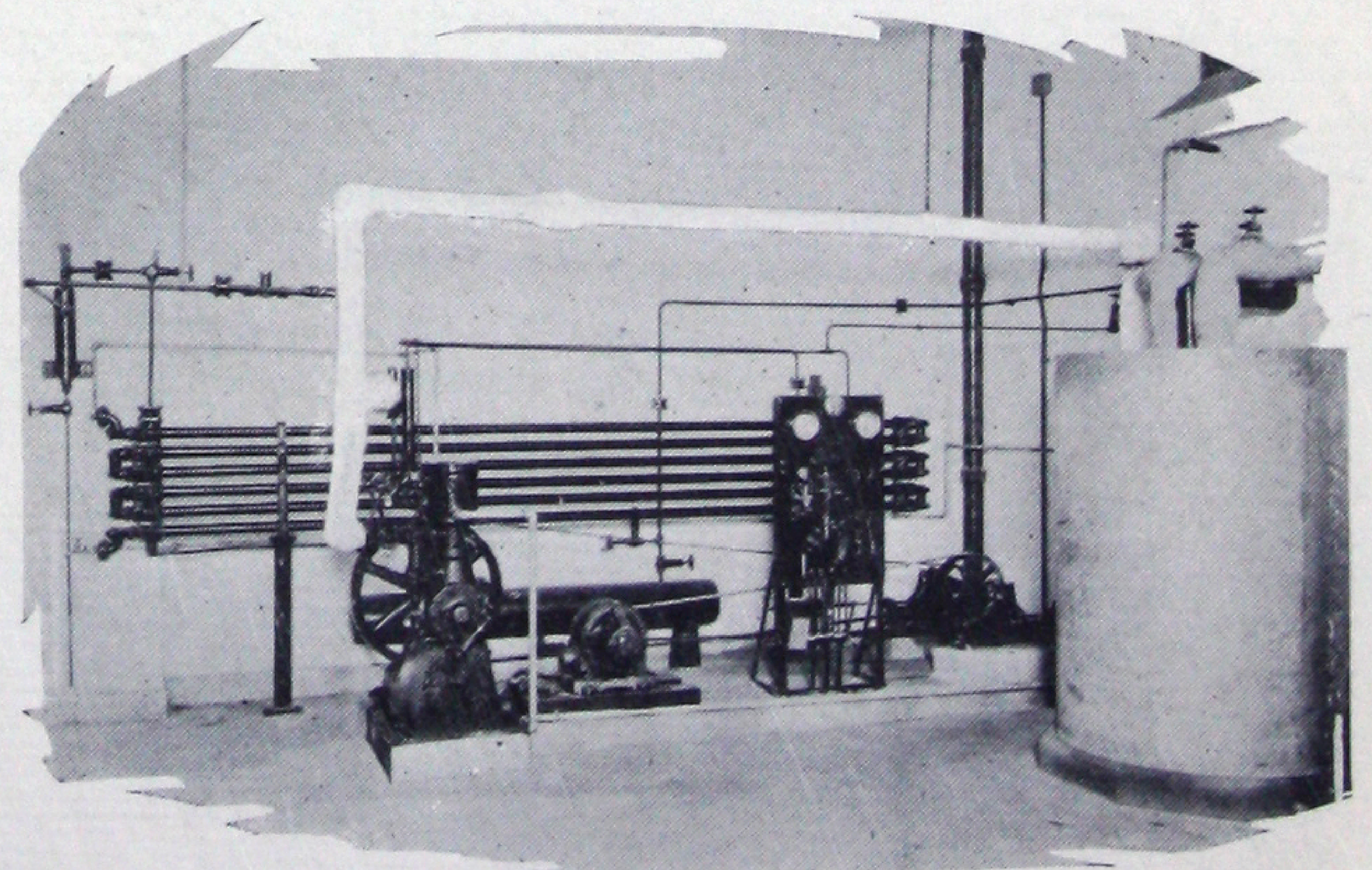
The compressor is really a pumping machine designed to compress the ammonia gas and force it through the pipes of the condenser under a pressure of from 150 to 185 lbs. per square inch. The size of the compressor is determined by the quantity of water to be cooled, since its refrigerating capacity is based upon the weight of ammonia gas it can handle in 24 hours, each pound of ammonia representing a known quantity of heat absorbing power.

The condenser is a series of double pipes—one inside of the other. The compressed ammonia passes through the outside pipe and is liquefied by giving off its heat to water running through the inner pipes.

The liquefied ammonia gas from the condenser is fed into the expansion coil by a sensitive expansion valve under a pressure of 25 lbs. per square inch. While the liquid ammonia in the coil is evaporating it produces an intense cold and absorbs heat from the drinking water to be cooled. After performing this refrigerating work, the gas is drawn into the cylinder of the compressor ready for another round of duty.

The Automatic Refrigerating  
Installation in the

*Western & Southern  
Life Insurance Building  
Cincinnati, Ohio*





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## *Automatic Refrigeration*

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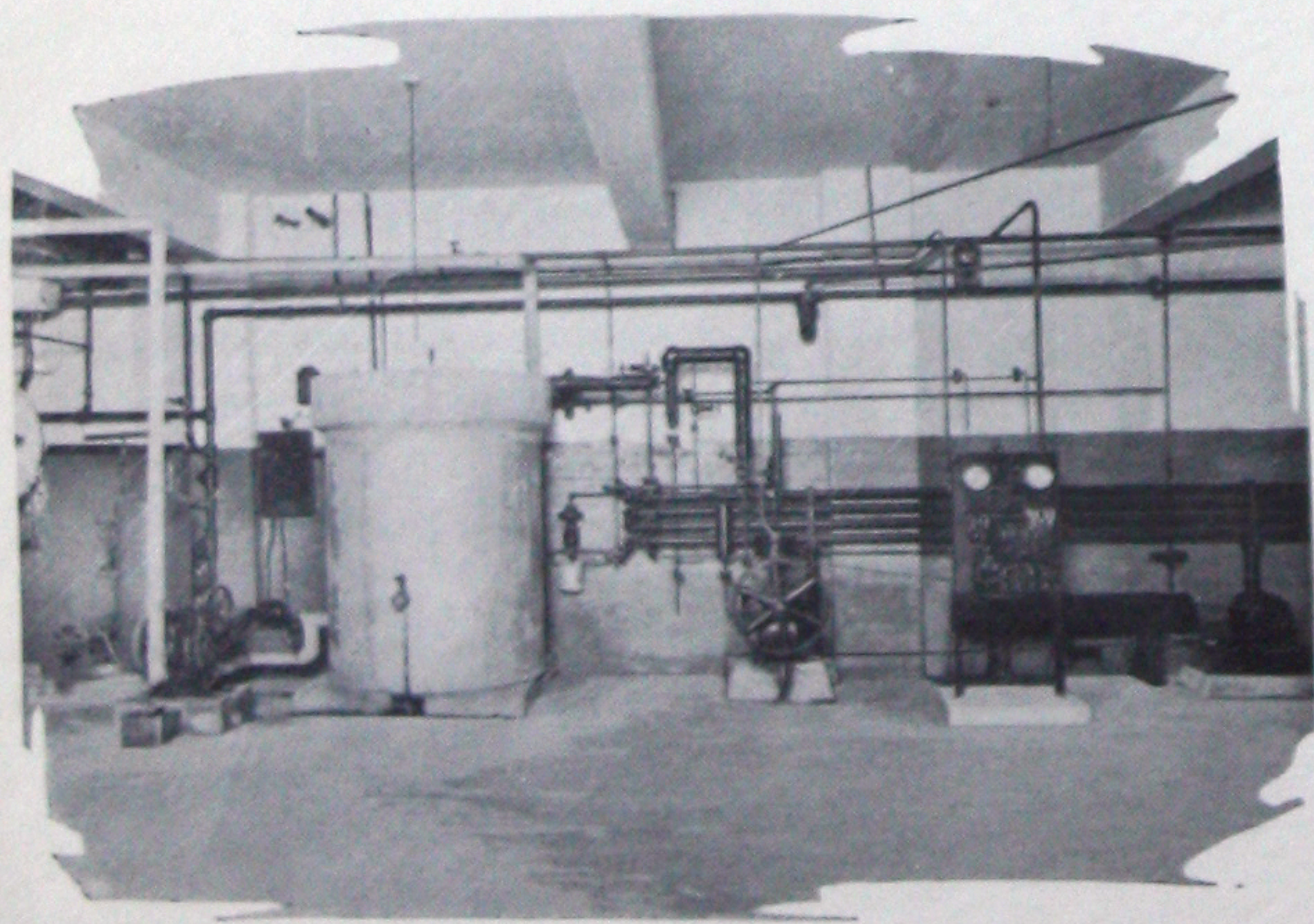
Electric motors are universally acknowledged to be the most practical and satisfactory method of supplying power in small units for driving machinery. This is especially true where a sensitive, prompt and certain control of a piece of machinery is essential to its success and is the reason why all Automatic plants are electrically driven and controlled. Oil and scale traps protect Automatic plants against foreign substances which may be introduced or accumulated in the system in the course of time.

A thermostat, connected to a bulb in the drinking water tank, controls the stopping and starting of the electric motor which drives the compressor. It is simple, dependable and always on the job. It keeps close watch over temperatures and saves electric power.

The system of Automatic Control, as designed for Automatic plants, keeps both motor and compressor working at their maximum efficiency; when they are stopped, all expense of operation ceases.

The Automatic Expansion Valve is so designed that it will at all times permit enough liquid ammonia to enter the coil to insure its being vaporized and at the same time to prevent too much ammonia being used. The Automatic Water Regulator maintains the most economical rate of water flow to the condenser which directly effects the economy of the plant since too little water means high operating pressure and increased power bills, while too much water results in waste and large water bills. It will thus be noted that economy is a paramount feature in the design of the Automatic system.

It sometimes happens, because of cold weather, fire, repairs to a city water main, etc., that there is a failure of the supply of water entering



The Automatic Refrigerating System in the  
*Armor Auto Company Building*  
*Houston, Texas*



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## *Cooled Drinking Water*

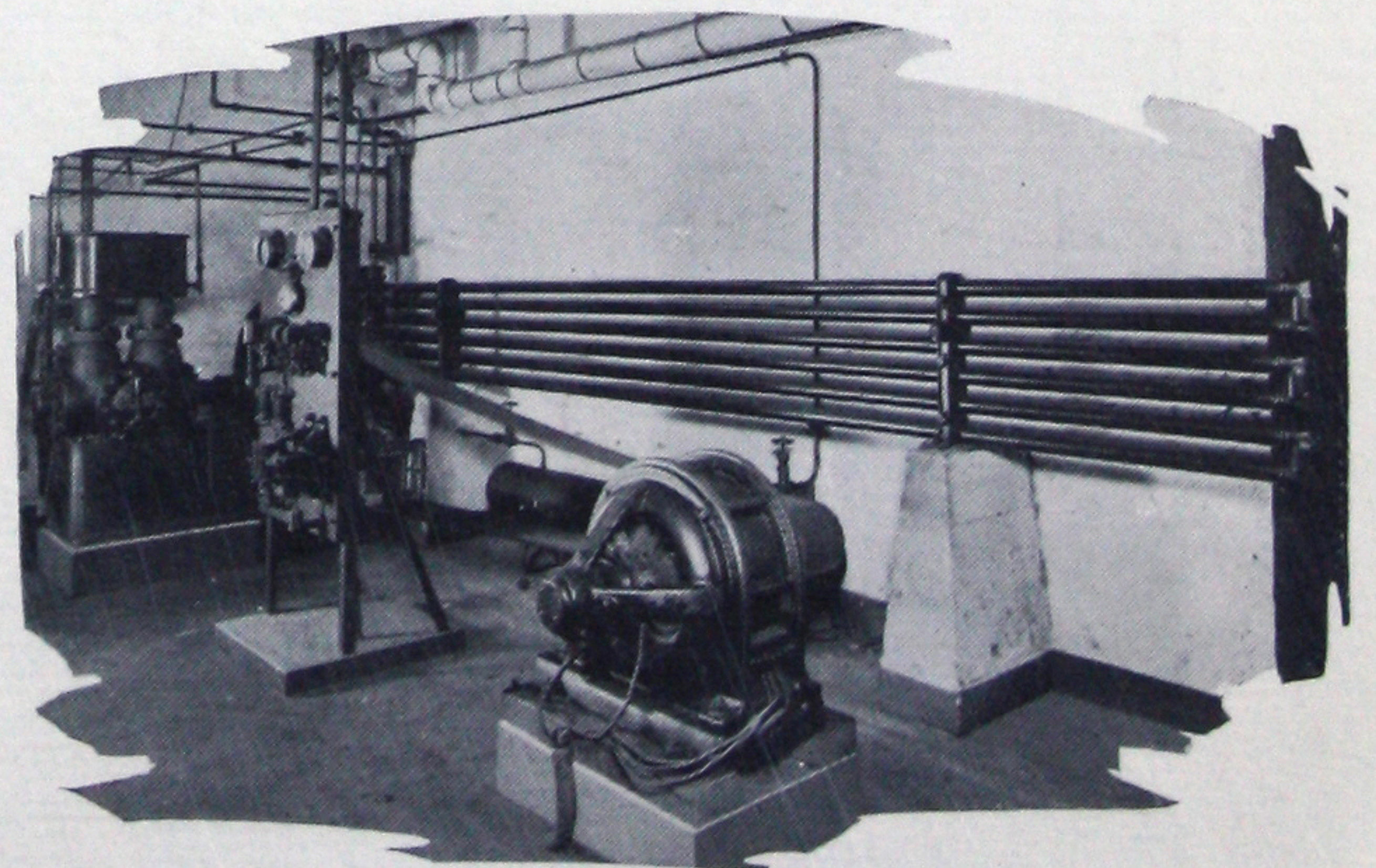
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the condenser. If the machine continued to run under such conditions, an excessively high pressure would develop, but in the Automatic system, it is impossible for this to occur, because as soon as an abnormal pressure occurred the machine would be automatically stopped by the Automatic High Pressure Safety Cutoff. At the same time that the machine is stopped, a warning bell is sounded, calling attention to the fact that something is wrong. As soon as the pressure returns to normal, the machine is again started automatically. The warning signal may be located at any convenient point or at any distance from the plant. Another feature of the Automatic High Pressure Safety Cutoff is that it operates by breaking—not making—a circuit. Electric contacts which are seldom used have a bad habit of failing in an emergency, because the contact points are dirty, corroded or insulated by an oil film. The contact breaking device on the Automatic High Pressure Safety Cutoff is certain to operate when needed and is always safe.

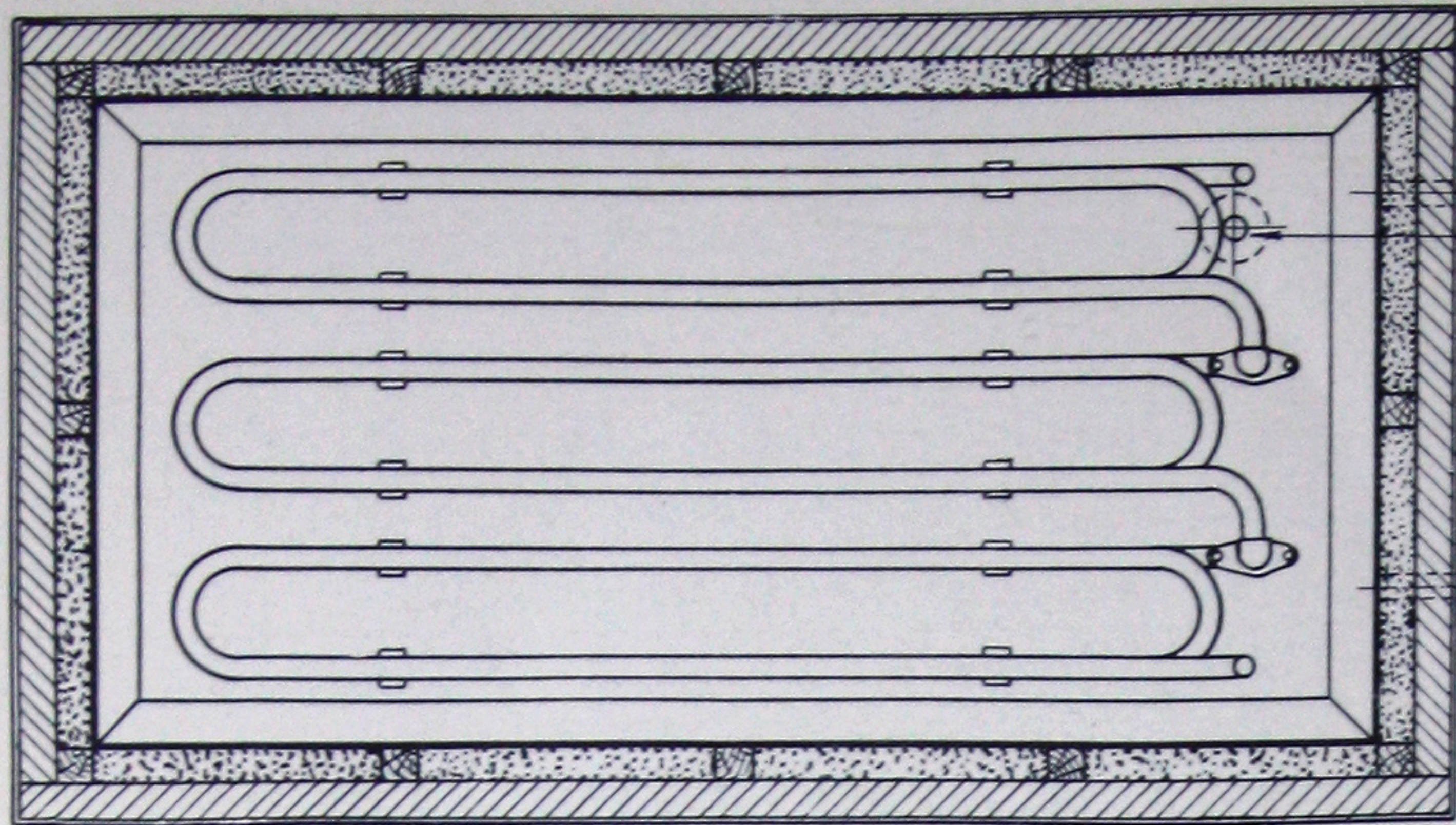
The Automatic Control Panel not only controls but protects the motor. Instead of unreliable fuses, positive acting electrical overloads are used, which protect the motor from damage. At every turn safety is made just as Automatic and certain as the satisfactory operation of the machine itself.

In buying Automatic Refrigeration the owner buys more than mere equipment. He actually buys service. In effect, he secures an adequate supply of drinking water cooled to the proper temperature and the guarantee of the manufacturers that the plant, as installed by them, will at all times do everything that is claimed for it.

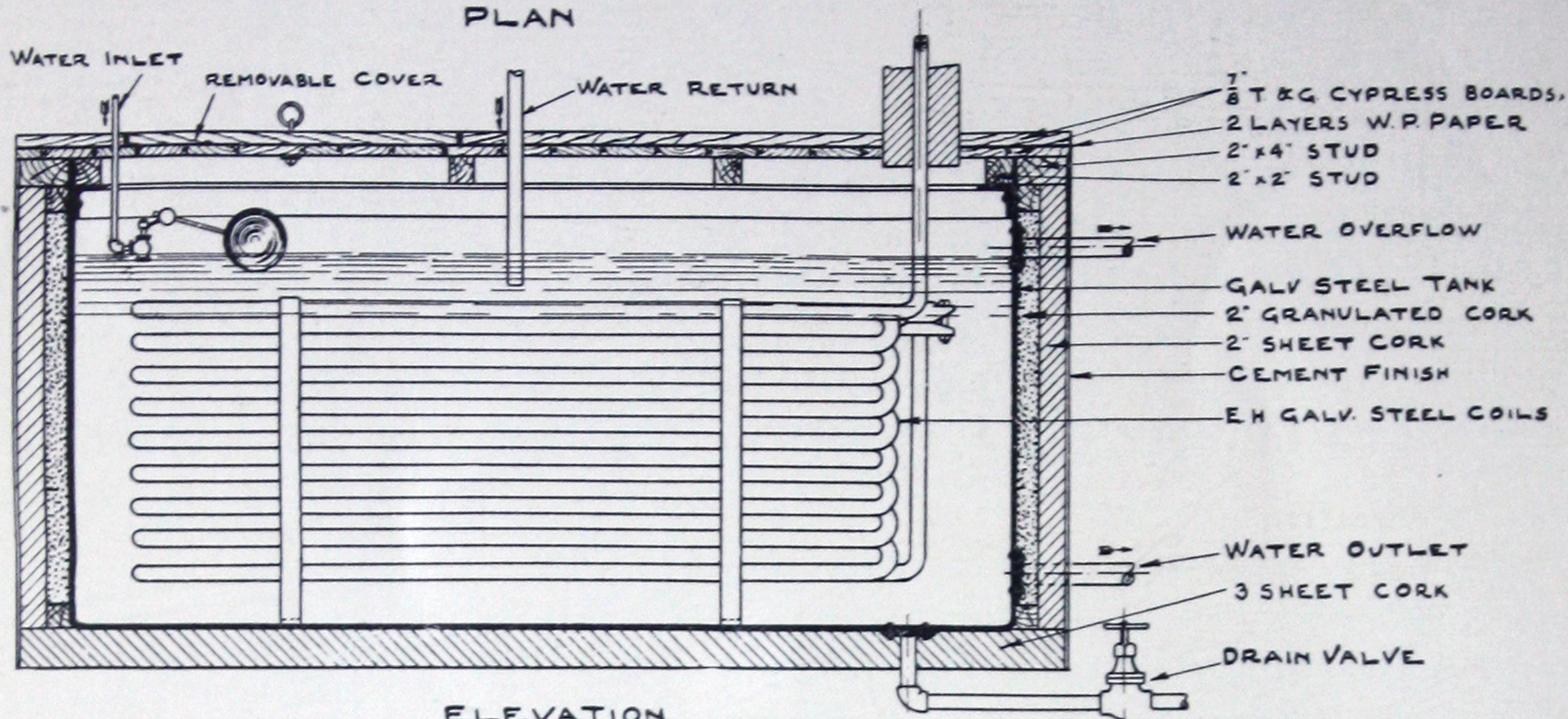
*The Automatic Refrigerating Plant  
Heard Building  
Jacksonville, Fla.*



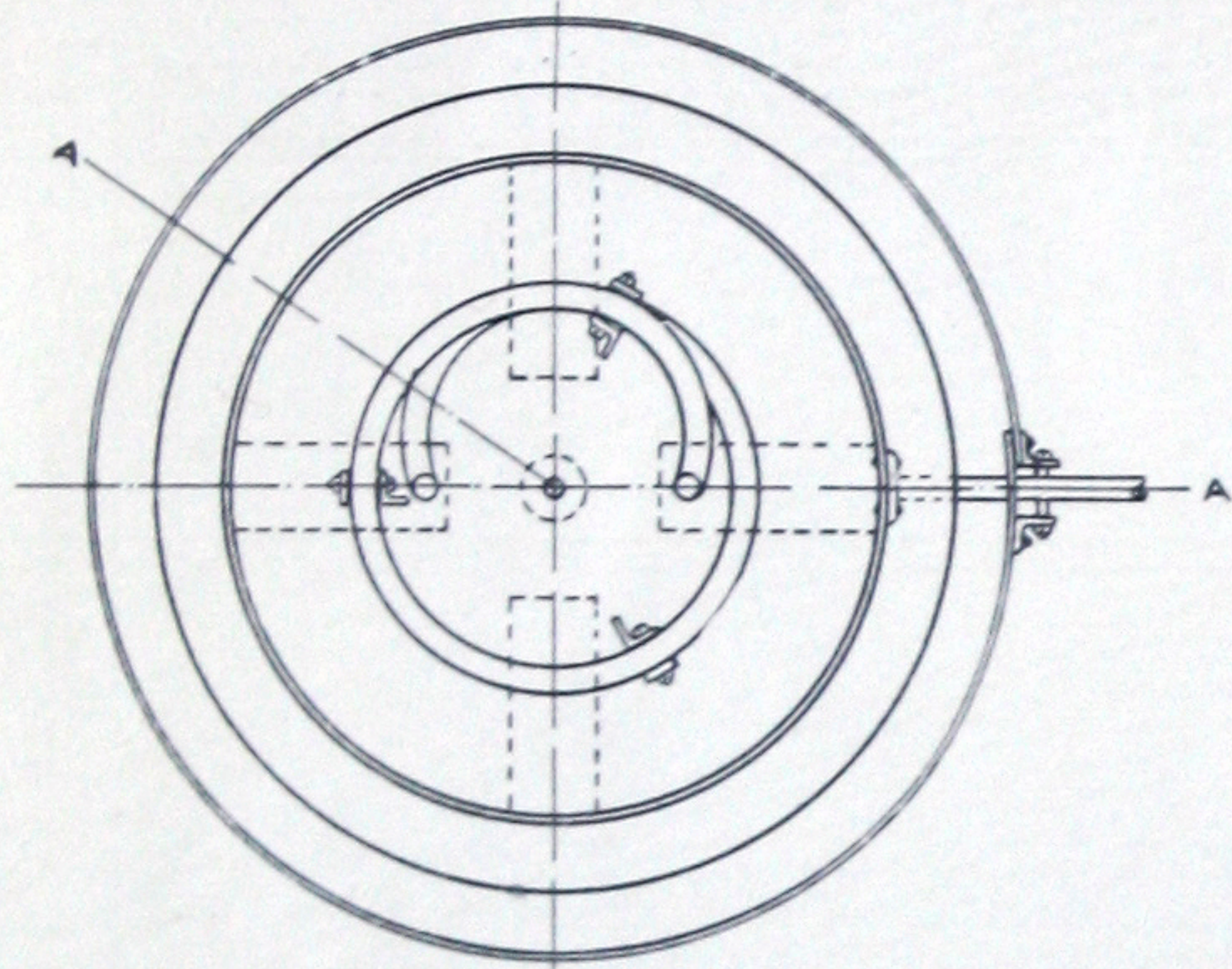




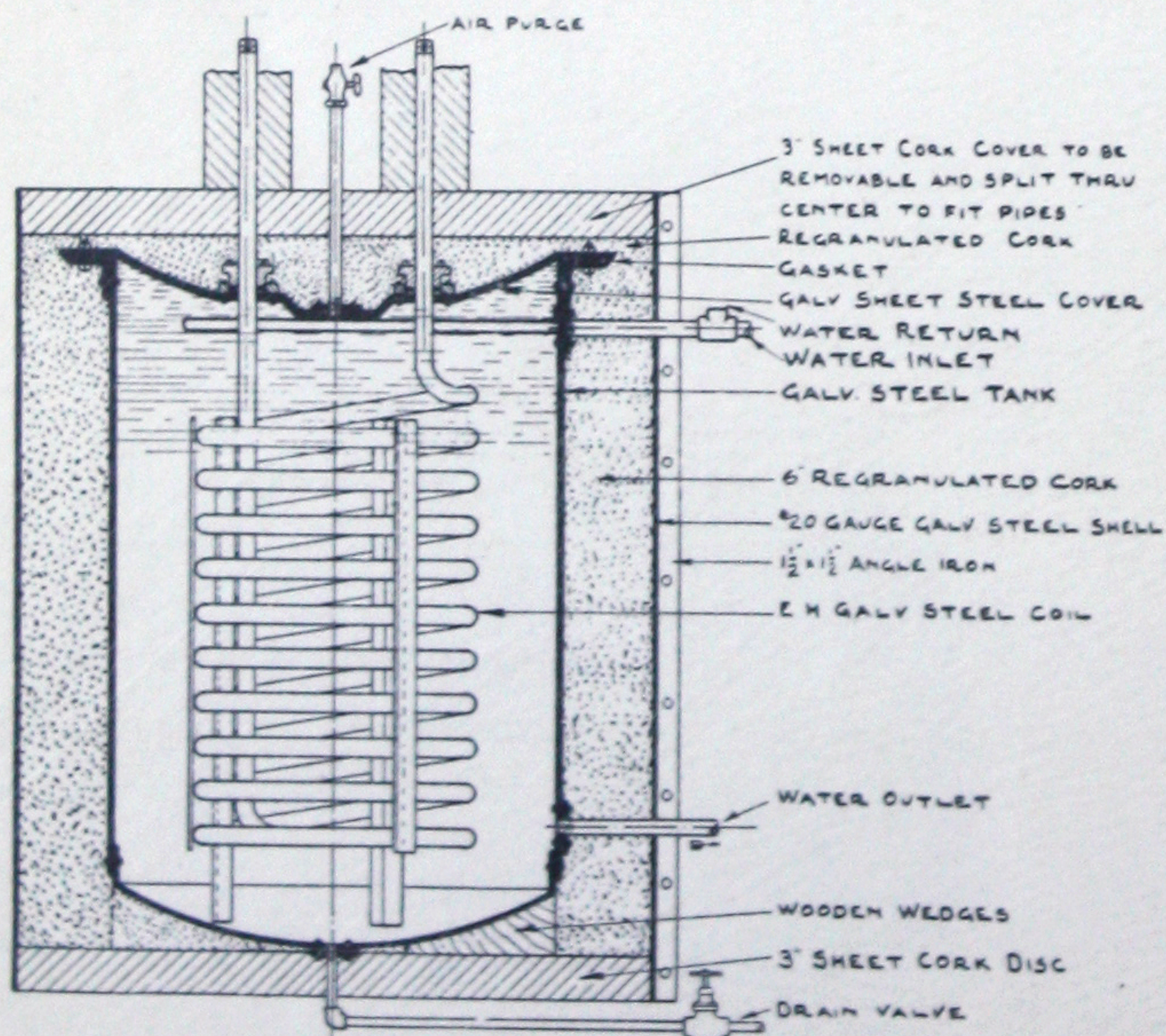
PLAN



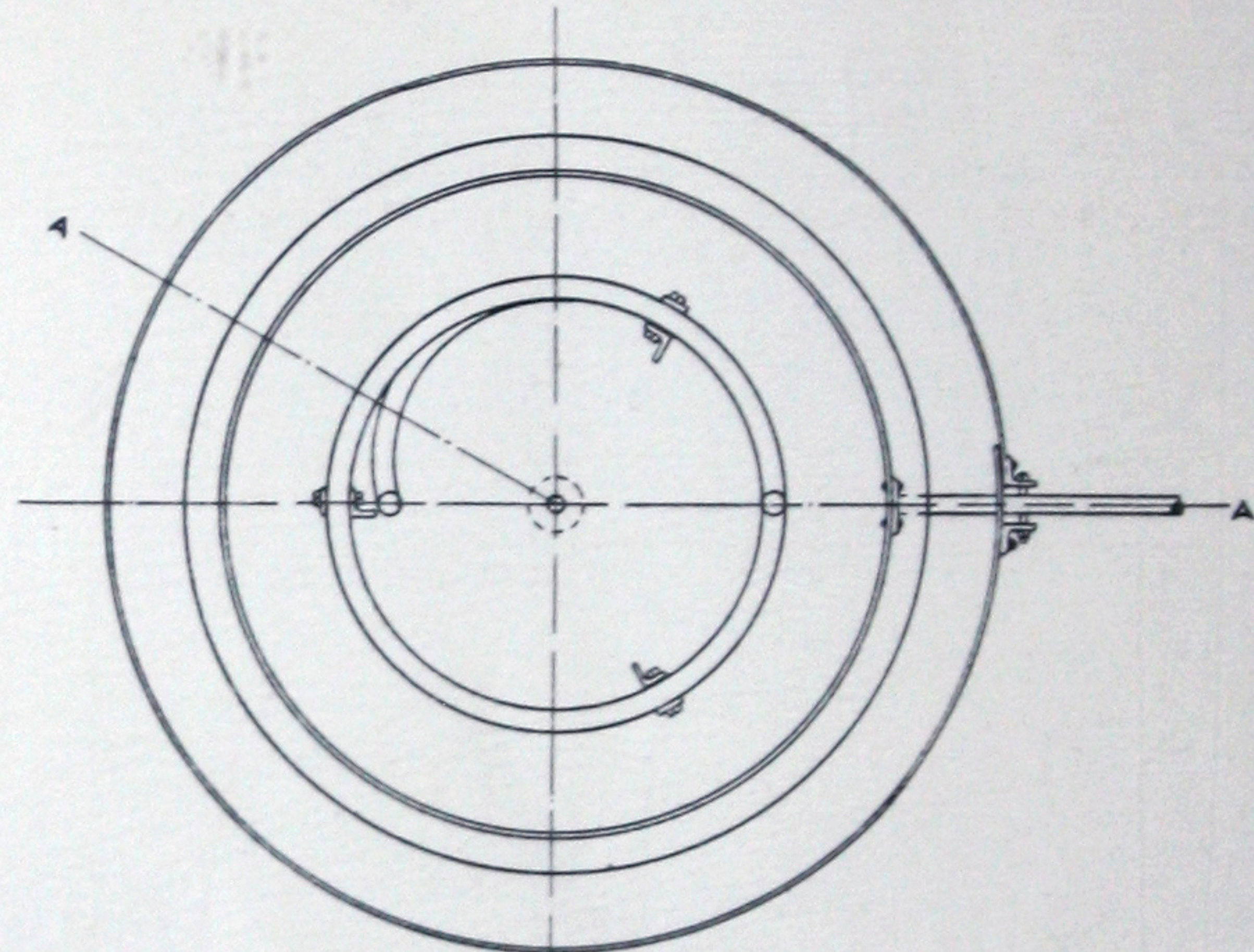
ELEVATION  
RECTANGULAR TANK



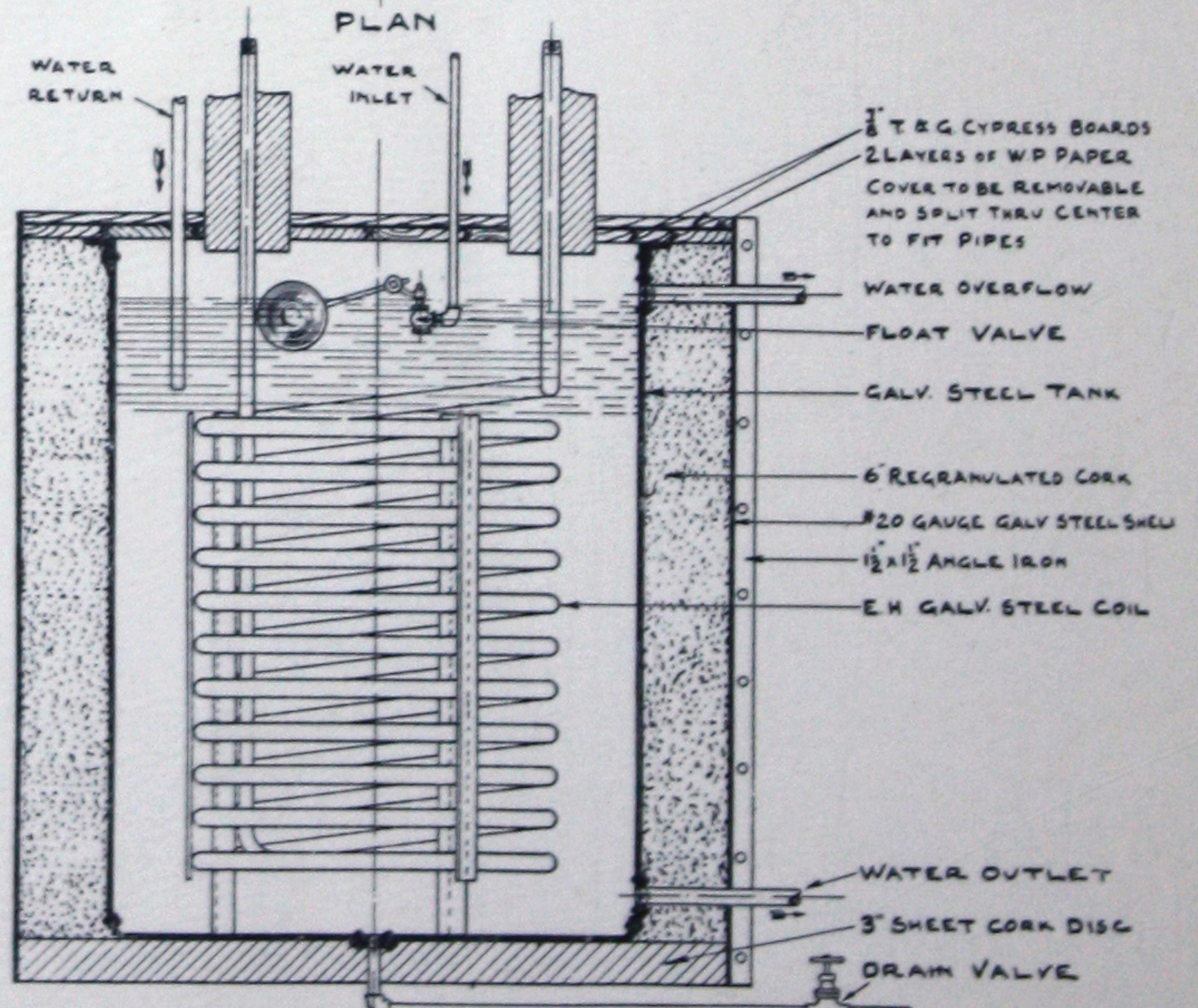
PLAN



ELEVATION  
PRESSURE TANK  
SECTION A-A



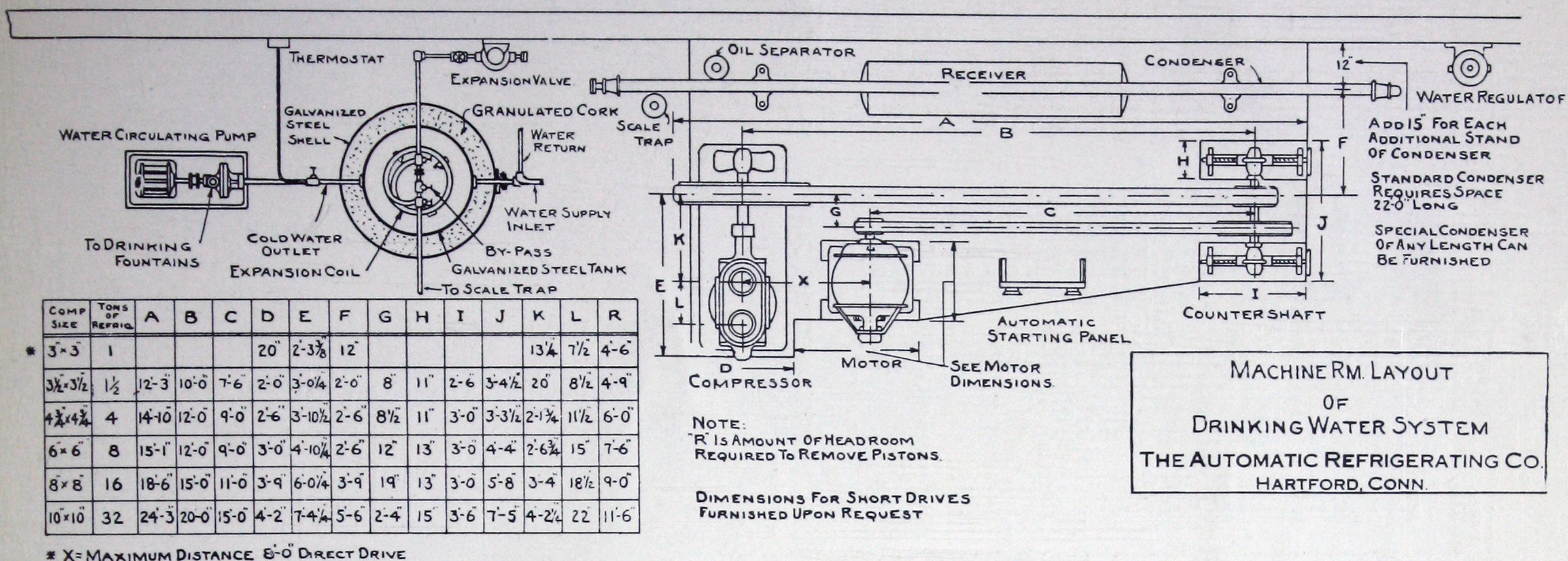
PLAN



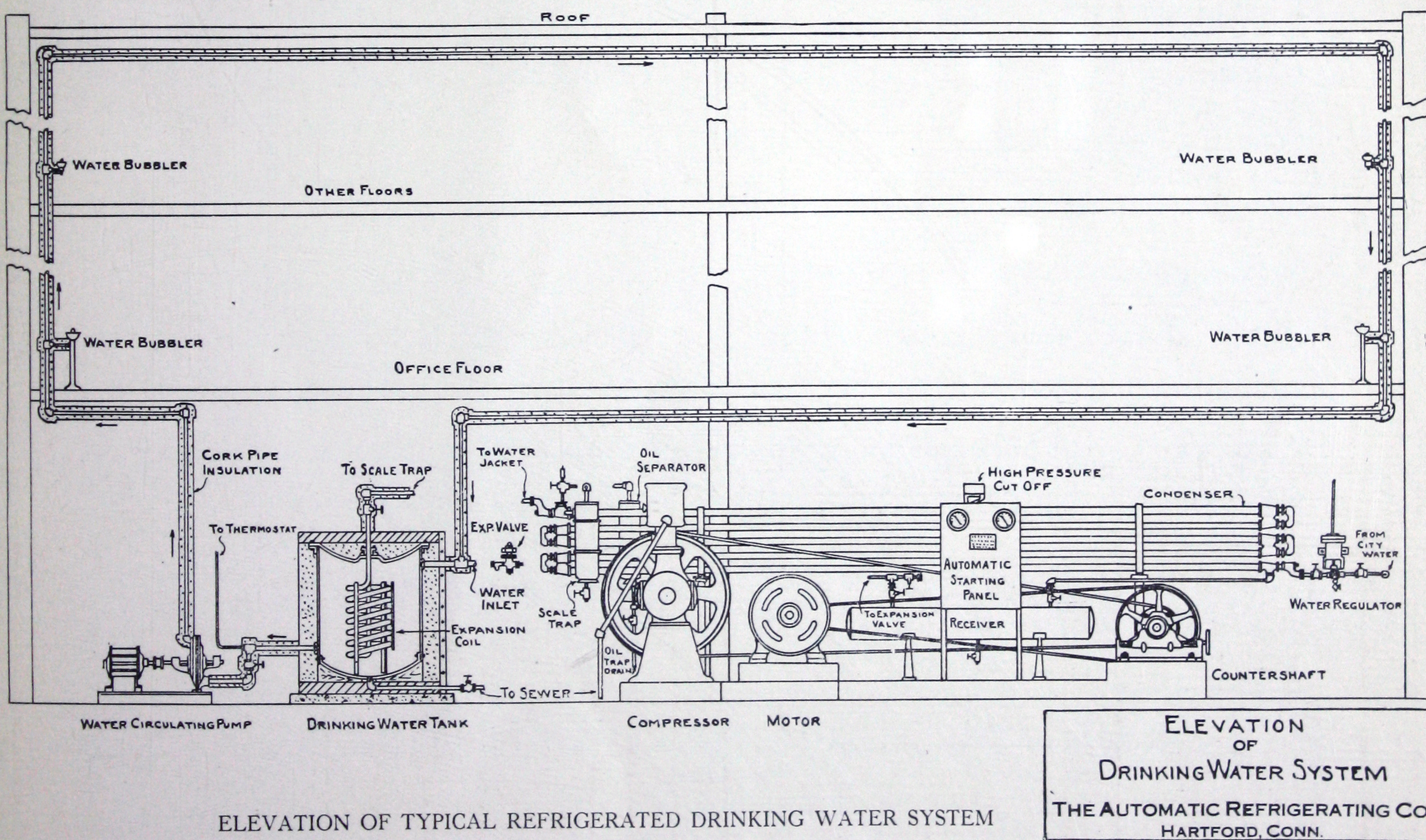
ELEVATION  
OPEN CYLINDRICAL TANK  
SECTION A-A



## Cooled Drinking Water



DIMENSIONS AND TYPICAL ROOM LAYOUT OF THE AUTOMATIC PLANT





DATA SHEET  
DRINKING WATER SYSTEM

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Number of persons to be supplied\_\_\_\_\_

Number of fountains or bubblers\_\_\_\_\_

Estimated gallons of water consumed per day\_\_\_\_\_

Is the demand for water heaviest at certain periods?\_\_\_\_\_

Length of periods\_\_\_\_\_

Is the demand for water continuous?\_\_\_\_\_

Approximate length of refrigerated water lines\_\_\_\_\_

Kind of electrical current\_\_\_\_\_ A.C. or D.C.\_\_\_\_\_ Phase\_\_\_\_\_

Voltage\_\_\_\_\_ Frequency\_\_\_\_\_

Source of water supply\_\_\_\_\_

Summer temperature of same\_\_\_\_\_

Maximum amount of ice now used\_\_\_\_\_

Please submit a rough sketch or blue print showing the location of fountains and indicate desired distance between fountains.

Also, state height between floors; number of floors to be supplied with drinking water and whether any section of refrigerated lines run underground.

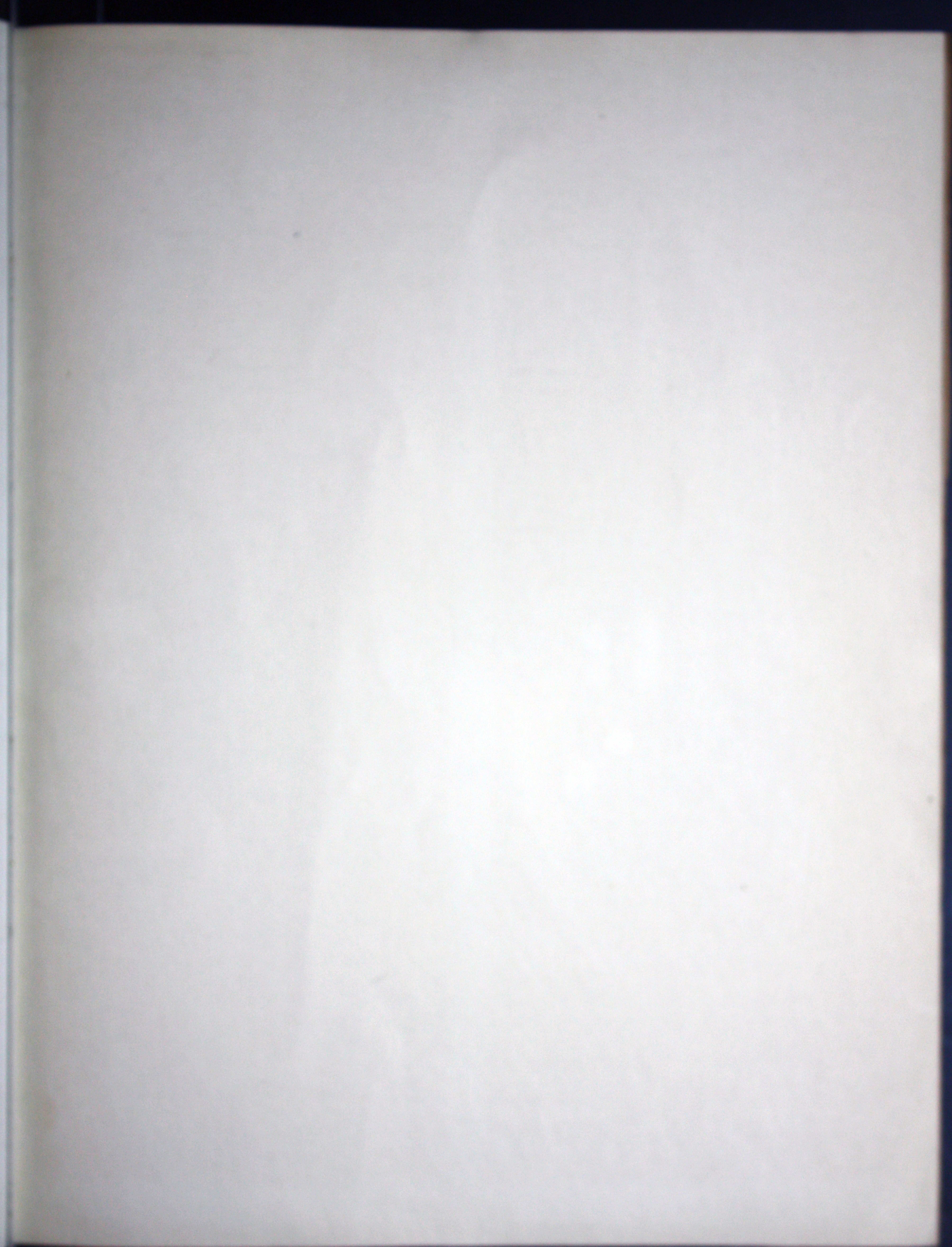
Signed\_\_\_\_\_

Address\_\_\_\_\_

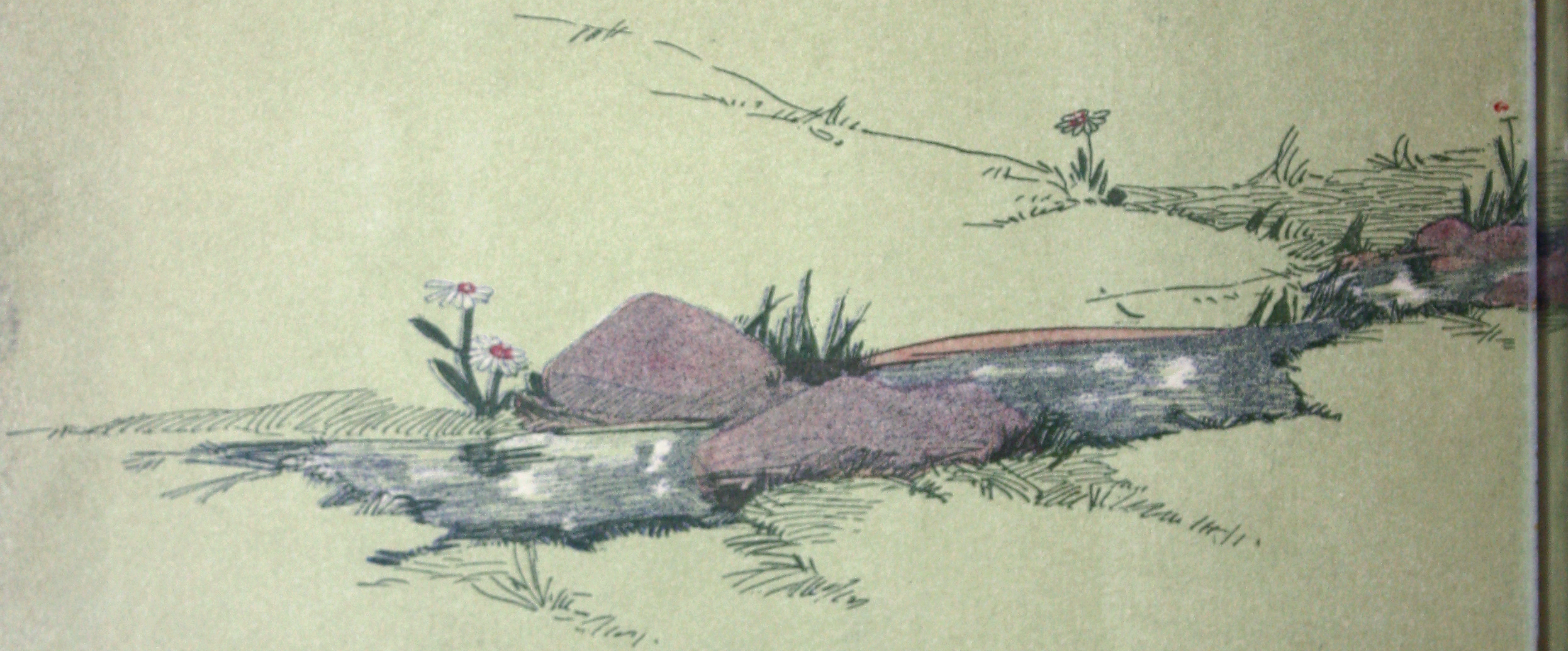
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Return to THE AUTOMATIC REFRIGERATING CO.  
(Incorporated)  
HARTFORD, CONN.











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